

Fig. 1

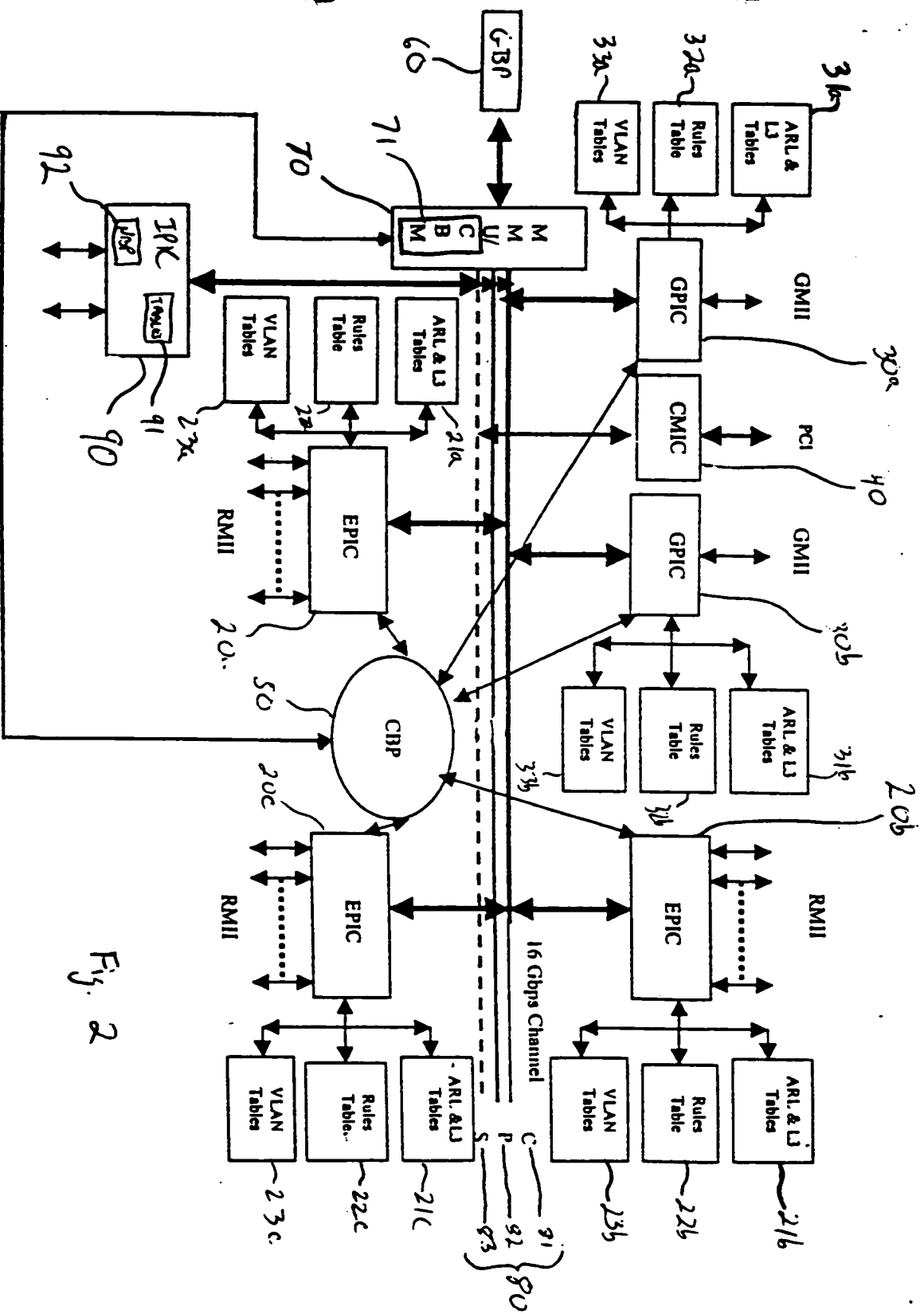


Fig. 2

**Locked and
sync to each
other**

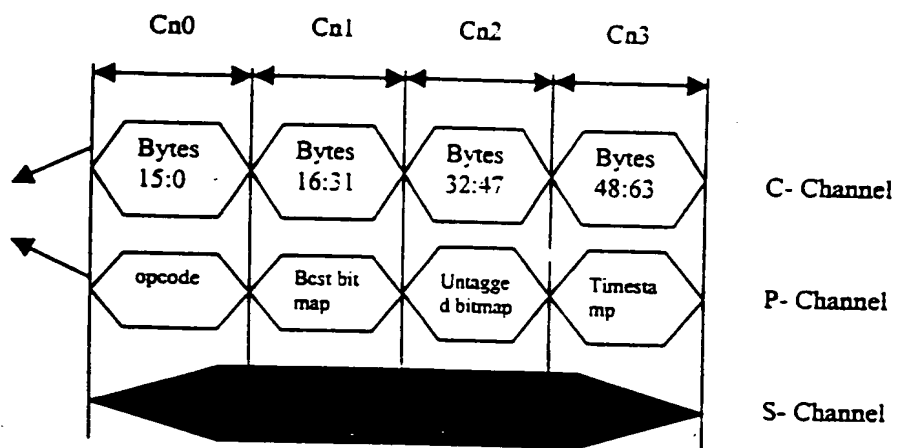


Fig. 3

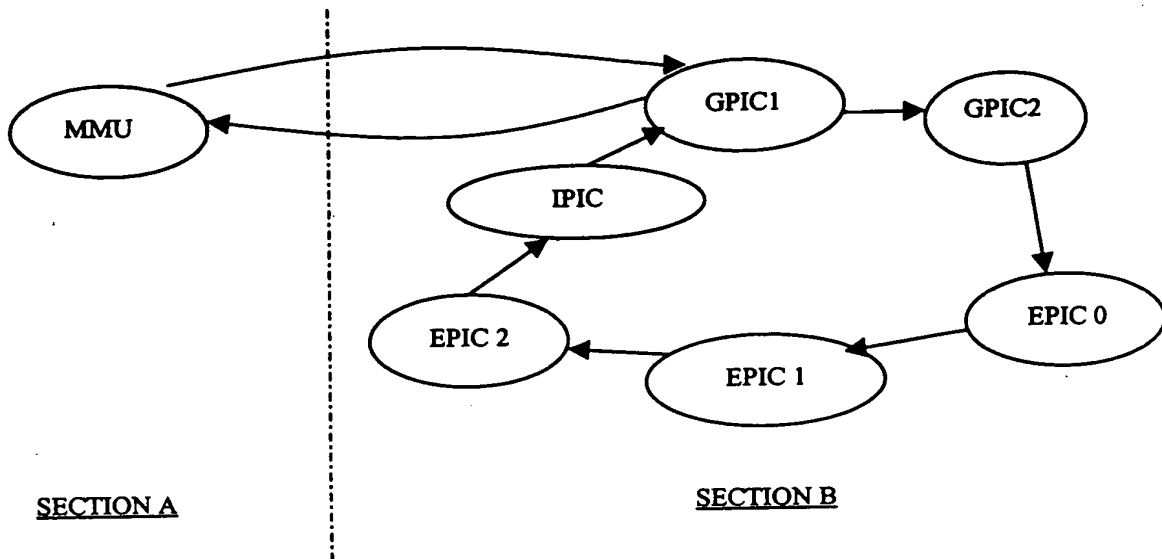


Fig. 4a

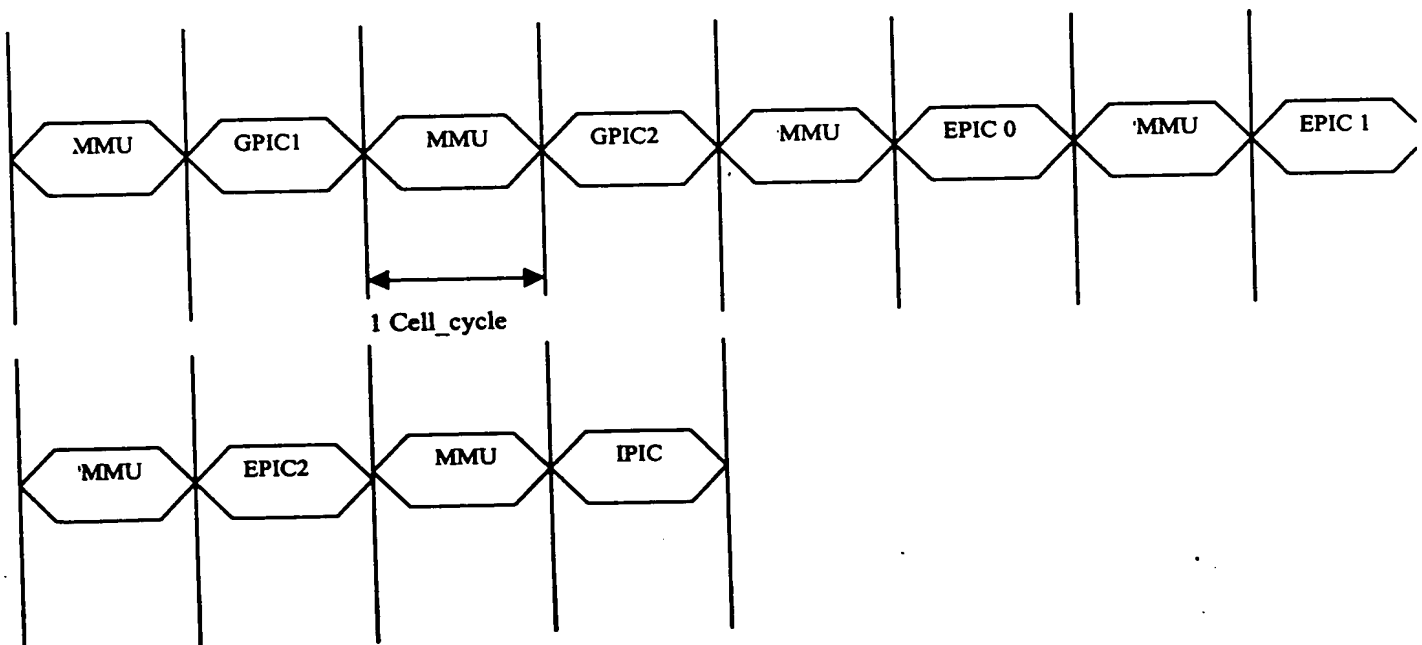


Fig. 4b

002780-6662350

Protocol Channel Messages

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
Opc ode	Ip IPX	Rese rved	Nxt cell	Src Dest Port			Cos	J	S	E	Cr c	P	O	Len	

62	60	58	56	54	52	50	48	46	44	42	40	38	36	34	32
Module Id Bitmap															

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
R	Bc/Mc Portbitmap														

62	60	58	56	54	52	50	48	46	44	42	40	38	36	34	32
PF M	New IP checksum								M	MT-ModId		T	TGID	Mod opcode	c

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
U	Untagged Portbitmap / Src Port Number (bit0..5)														

62	60	58	56	54	52	50	48	46	44	42	40	38	36	34	32
Rsvd		Matched Filter		Vlan Id						Src Port			Remote Port		

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
CPU Opcodes										TimeStamp					

62	60	58	56	54	52	50	48	46	44	42	40	38	36	34	32
R	L3 Port Bitmap														

Fig. 5

0047ED-66623960

Side Band Channel Messages

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
Opcode			Dest Port / Destination Dev Id			Src Port			DataLen			E	EC ode	Cos	C
Address															
Data															

Fig. 6

00527999-091700
002160-6662560

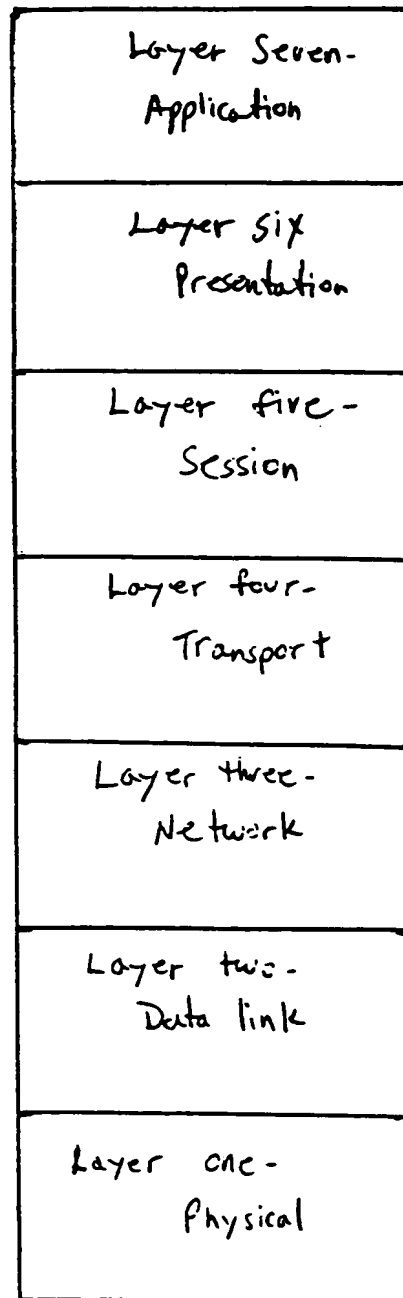


Figure 7
Prior Art

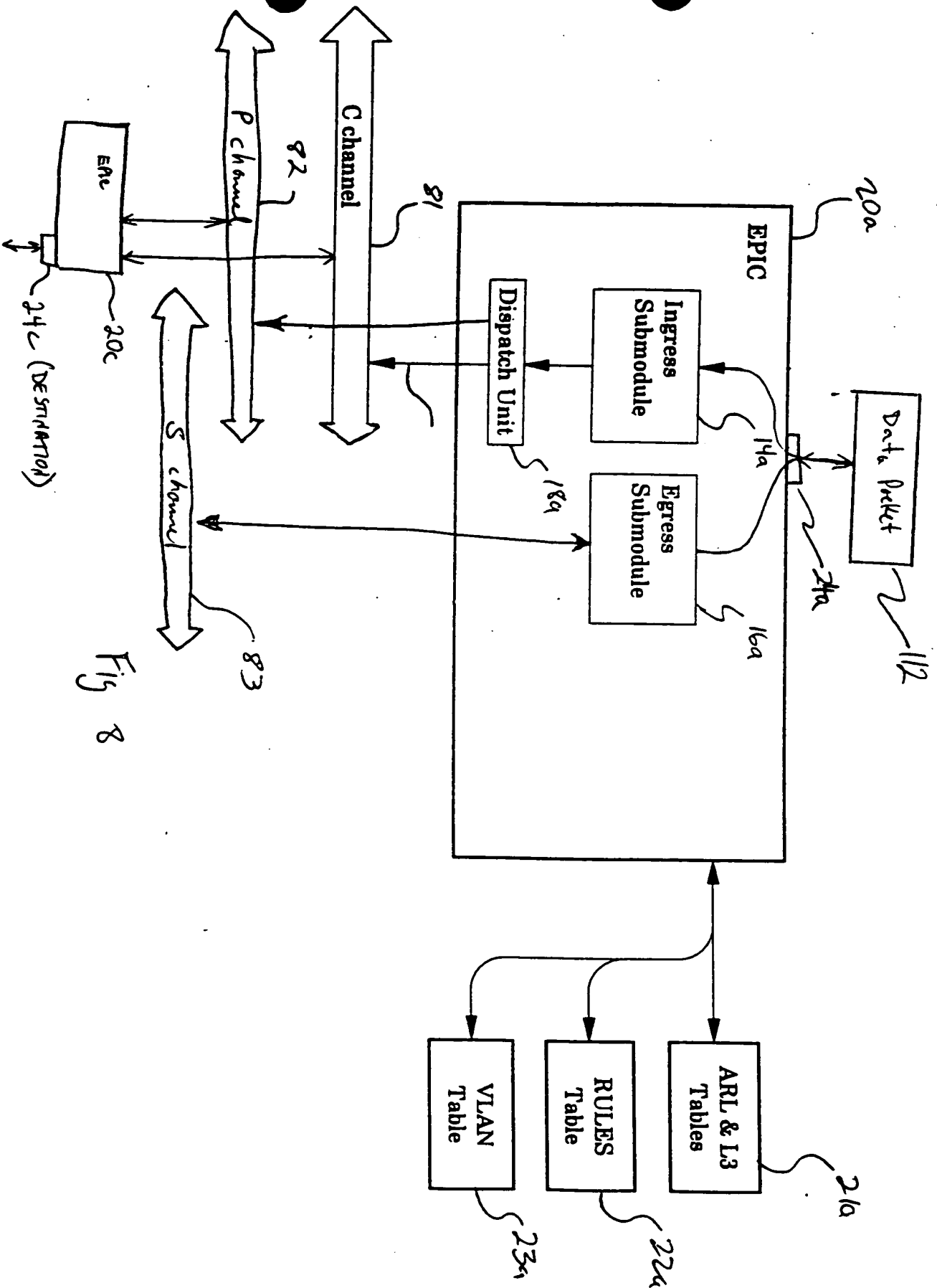


Fig 8

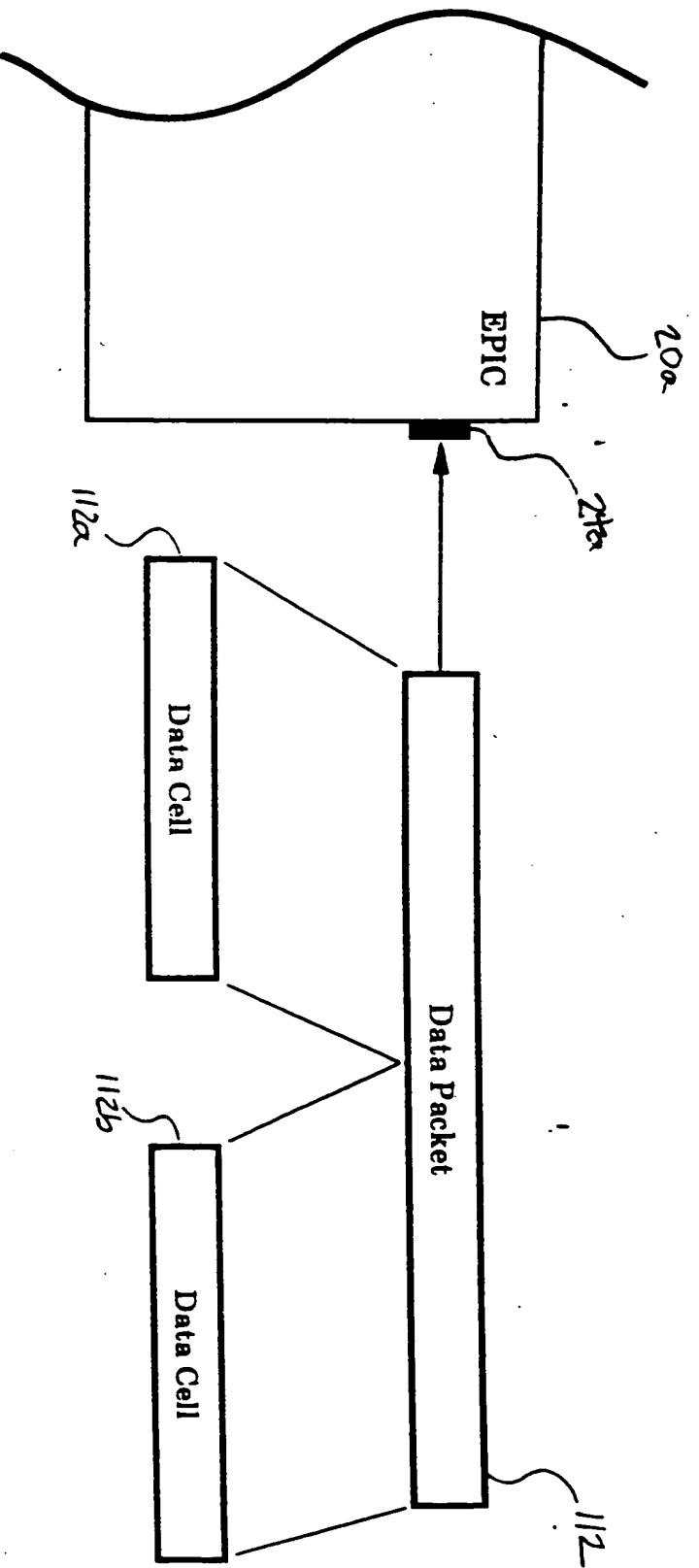


Fig. 9

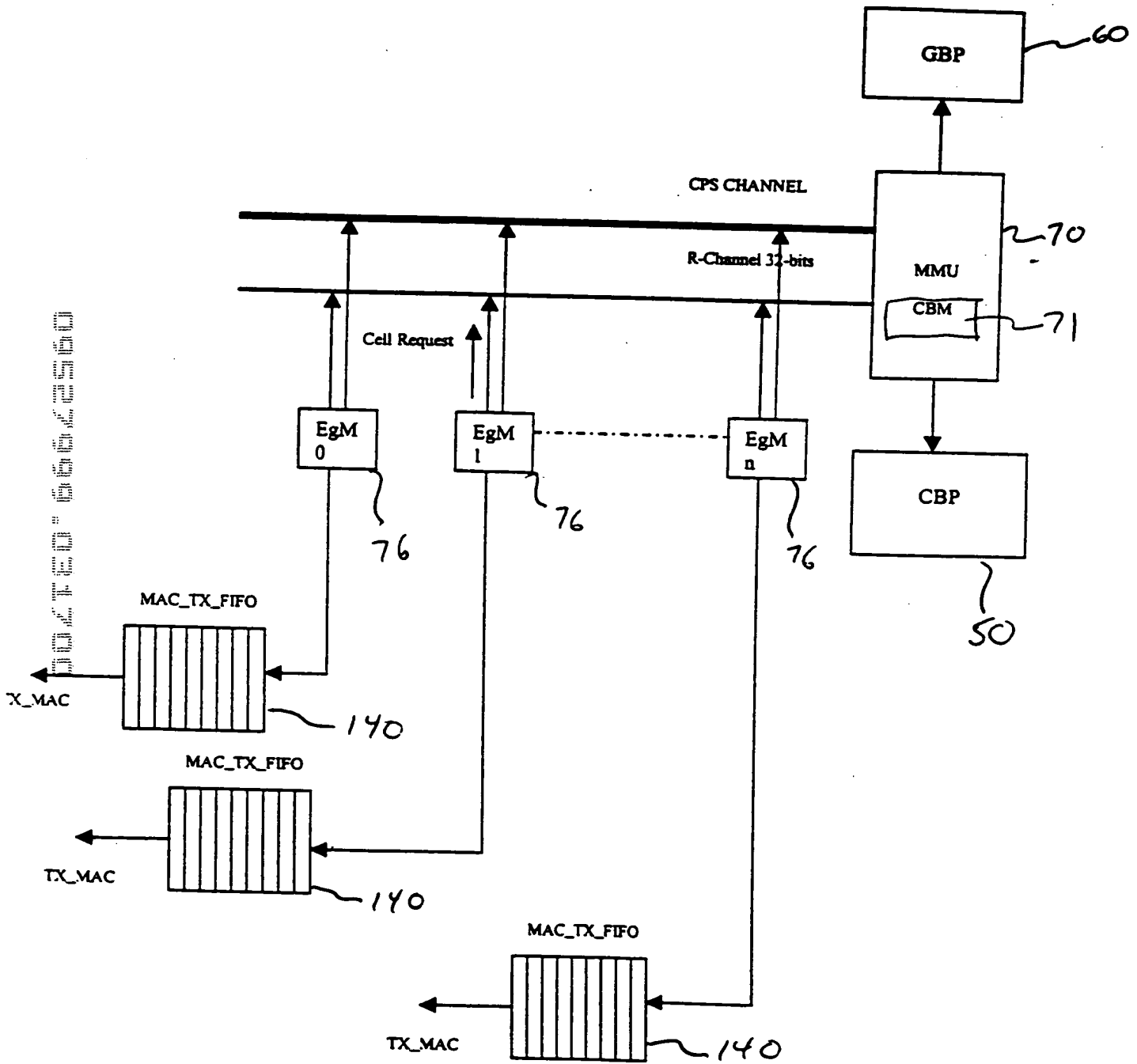


Fig. 10

004FED-666E560

Line 0 →	FC LC BC/MC Cpy_cnt(5b) Cell_length (7b) CRC (2b) NC_header (16b) Src Count(6b) IPX IP Time_Stamp (14b) O bits(2b) P NextCellLen(2b) CpuOpcode(4b) Cell_data (0-9B)
Line 1 →	Cell_data (10-27) Bytes
Line 2 →	Cell_data (28-45) Bytes
Line 3 →	Cell_data (46-63) Bytes

Fig. 11

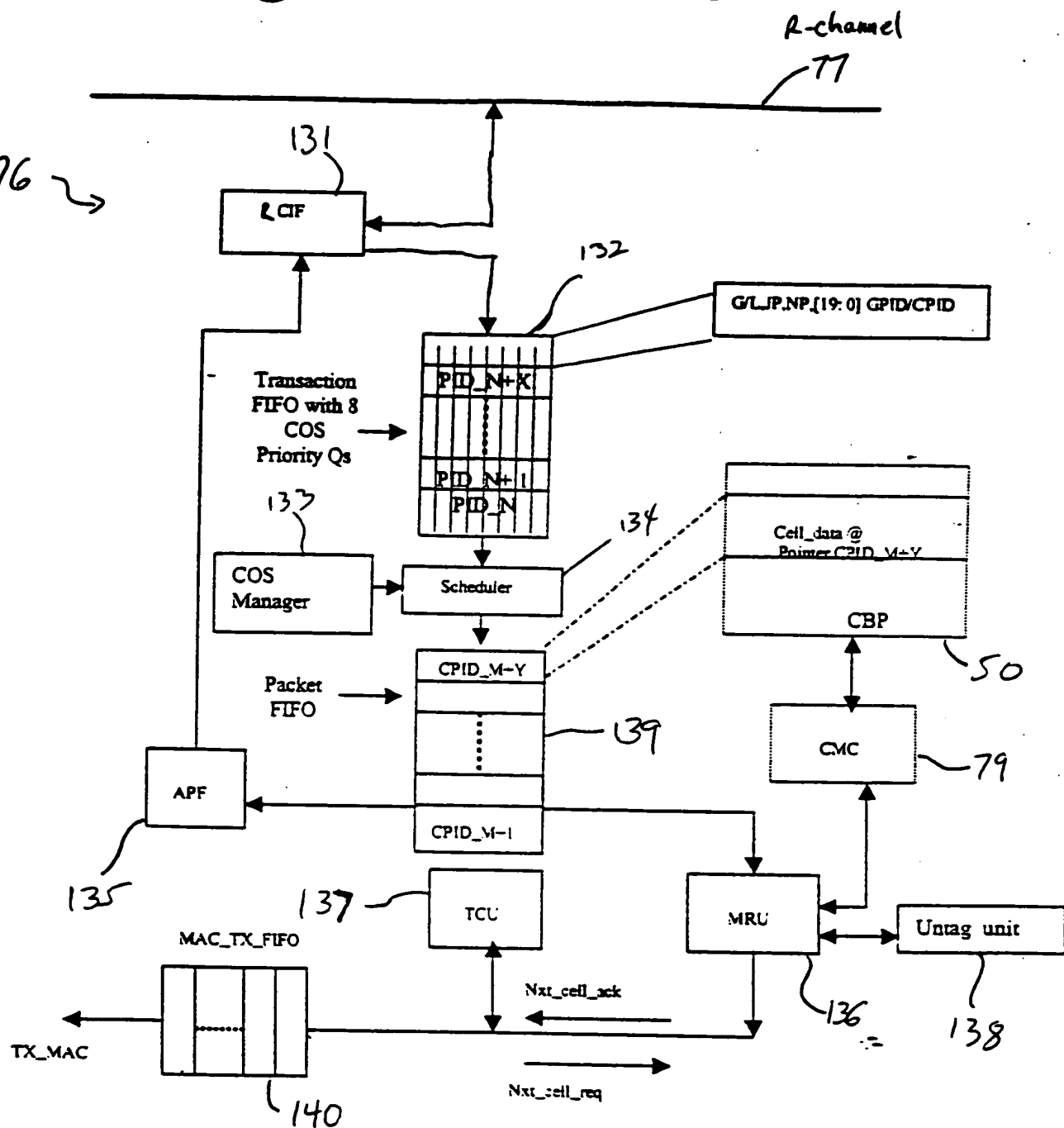


Fig 13

Data Flow

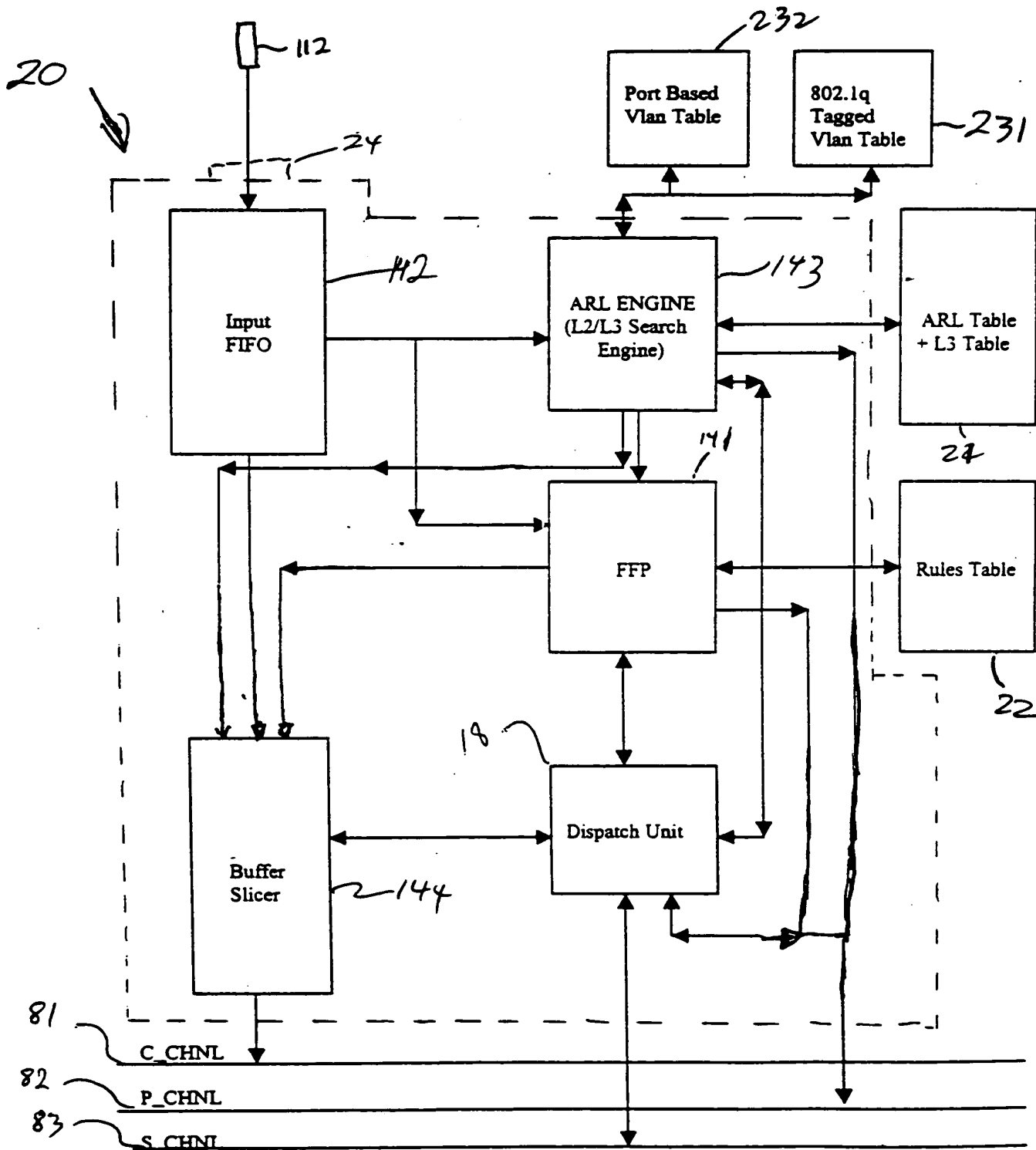
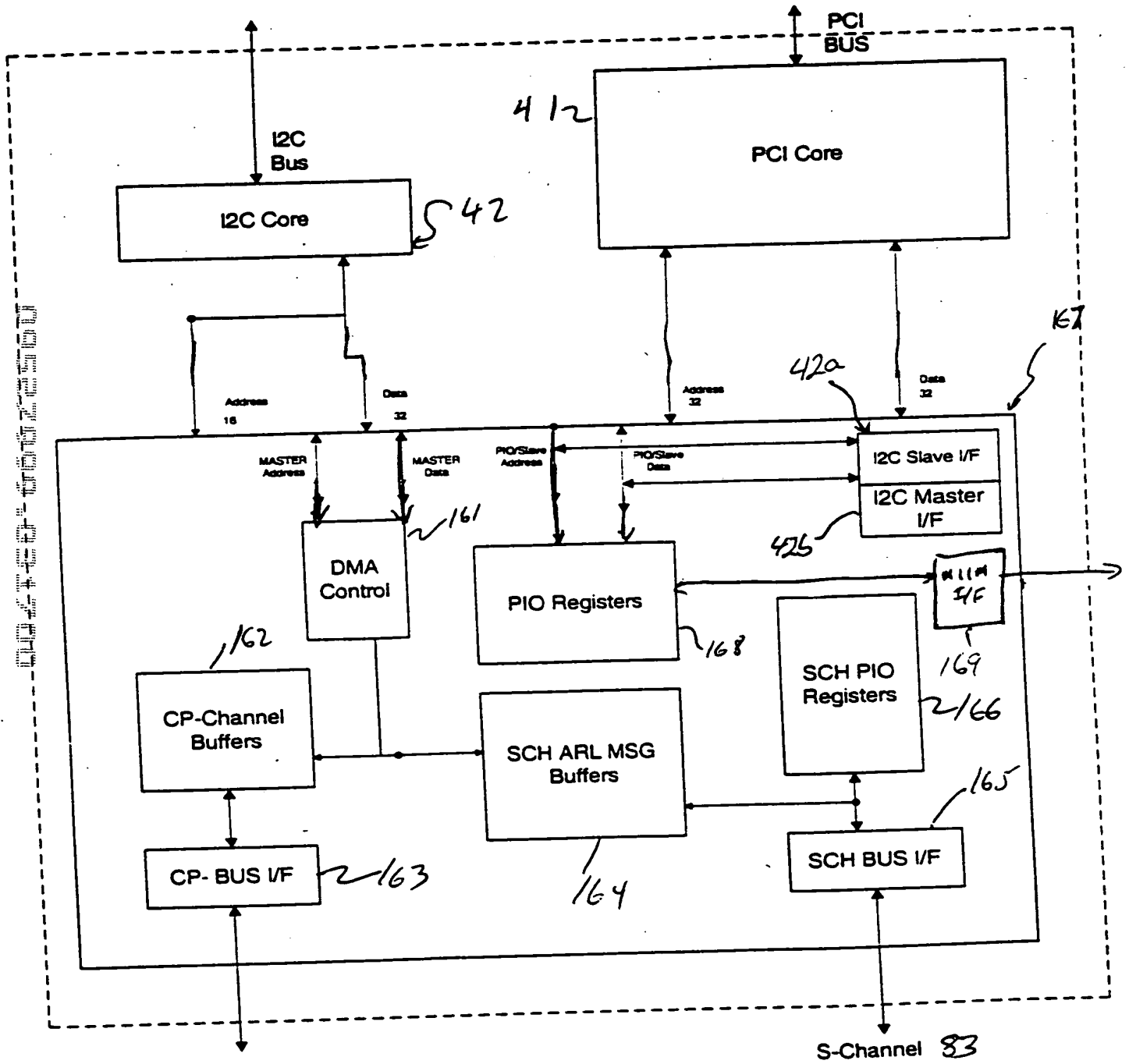


Fig. 14

40



C channel 81
P channel 82

Fig. 16

FFP Programming Flow Chart

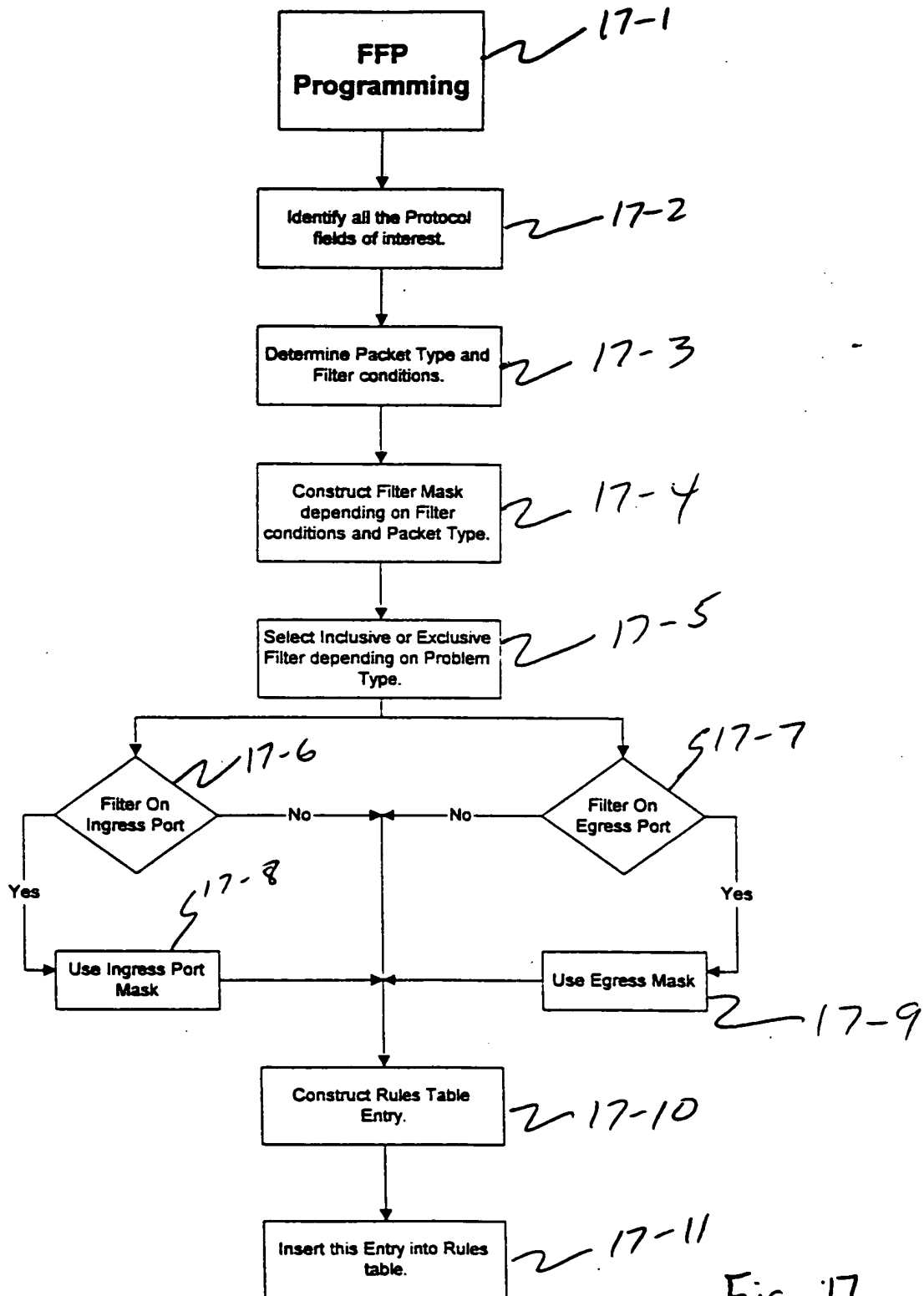


Fig. 17

001101 00000000

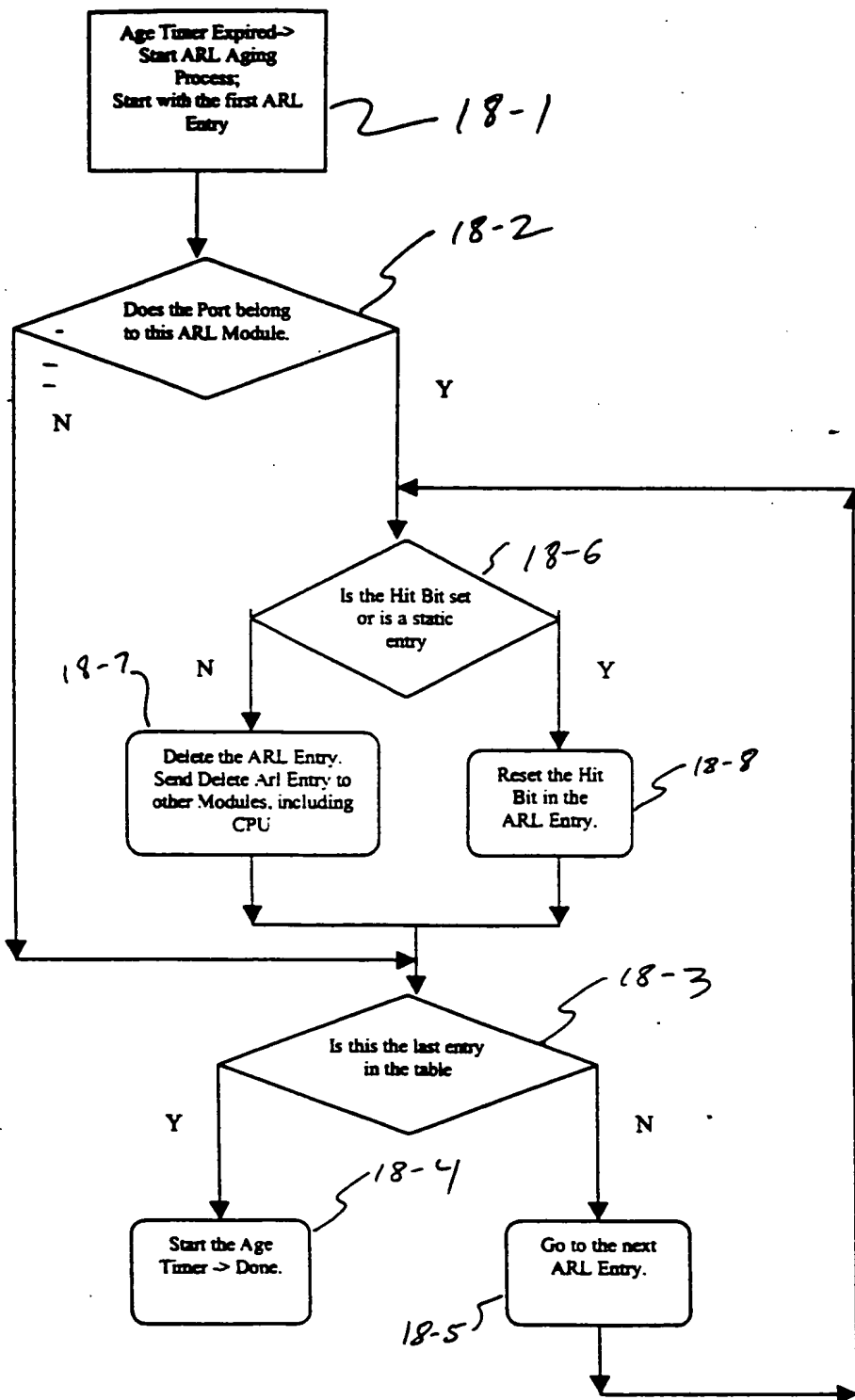


Fig. 18

00527099-01300
0027ED-6662560

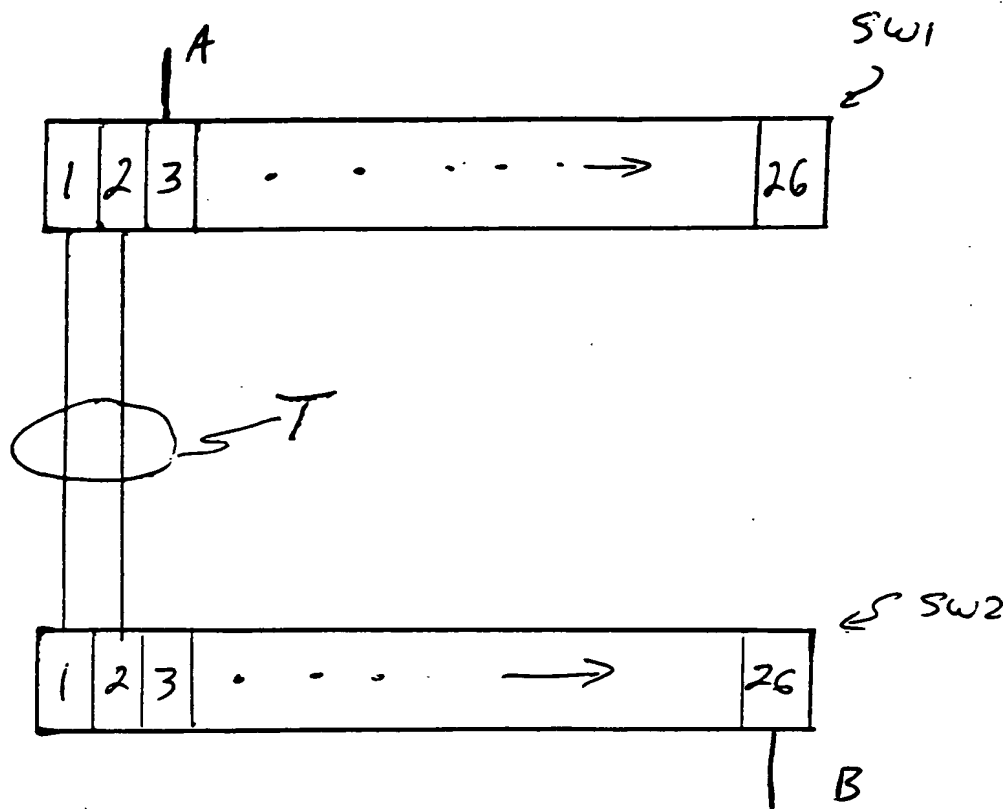


Fig. 19

[illegible]

Field	Header	Size	Offset For Ethernet II Untagged	Offset For Ethernet II Tagged	Offset For SNAP Untagged	Offset For SNAP Tagged
Destination Mac Address	Mac	6 Bytes	0	0	0	0
Source Mac Address	Mac	6 Bytes	6	6	6	6
Protocol Type	Mac	2 Bytes	12	16	20	24
Destination SAP	802.3	1 Byte	NA	NA	14	18
Source SAP	802.3	1 Byte	NA	NA	15	19
802.1p Priority	Mac	3 bits	NA	14	NA	14
VLAN Id	Mac	12 bits	NA	14+ 4b	NA	14+4b
TOS Precedence	IP	3 bits	15	19	23	27
Differentiated Services	IP	6 bits	15	19	23	27
Source IP Address	IP	4 Bytes	26	30	34	38
Destination IP Address	IP	4 Bytes	30	34	38	42
Protocol	IP	1 Byte	23	27	31	35
Source Port	TCP/ UDP	2 Bytes	34	38	42	46
Destination Port	TCP/ UDP	2 Bytes	36	40	44	48
TCP Control Flags (For aligning on Byte boundary 2 bits of reserved bits preceding this field is included)	TCP	1 Byte	47	51	55	59
Data at Offset 1	NA	8 Bytes	Data Offset1 From start of IP / IPX Header	Data Offset1 From start of IP / IPX Header	Data Offset1 From start of IP / IPX Header	Data Offset1 From start of IP / IPX Header
Data at Offset 2	NA	8 Bytes	Data Offset2 From start of IP / IPX Header	Data Offset2 From start of IP / IPX Header	Data Offset2 From start of IP / IPX Header	Data Offset2 From start of IP / IPX Header
Data at Offset 3	NA	8 Bytes	Data Offset3 From start of IP / IPX Header	Data Offset3 From start of IP / IPX Header	Data Offset3 From start of IP / IPX Header	Data Offset3 From start of IP / IPX Header
Data at Offset 4	NA	8 Bytes	Data Offset4 From start of IP / IPX Header	Data Offset4 From start of IP / IPX Header	Data Offset4 From start of IP / IPX Header	Data Offset4 From start of IP / IPX Header

Figure 20

Fig 2

Filter Mask Format:

Filter Enable (1b)	Counter (5b)	Rem Port (1b)	Output Mod (5b)	Output Port (6b)	TOS Prec (3b)		Diff Serv (6b)	802.1p Prior (3b)	
NMA Enb (1b)	No Match Action (10b)	Data Offset 4 (7b)	Data Offset 3 (7b)	Data Offset 2 (7b)	Data Offset 1 (7b)	Ingress Port Mask (6b)	Egress ModId Mask (5b)	Egress Port Mask (6b)	
Field Mask									

Field Mask Format:

Dest Mac addr (6 B)	Src Mac addr (6 B)	Prot type (2 B)	Dest SAP (1 B)	Src SAP (1 B)	802.1 p Prio (3 b)	Vlan Id (12b)	TOS Prec (3b)	Diff Serv (6b)	Src IP addr (4B)	Dest IP addr (4 B)	Prot IP- (1B)	Src Port (2B)	Dest Port (2B)
------------------------------	-----------------------------	-----------------------	----------------------	---------------------	-----------------------------	-------------------------	---------------------	----------------------	---------------------------	-----------------------------	---------------------	---------------------	----------------------

TCP Cntr Flags (1B)	Data 1 (8B)	Data 2 (8 B)	Data 3 (8B)	Data 4 (8B)
------------------------	----------------	-----------------	----------------	----------------

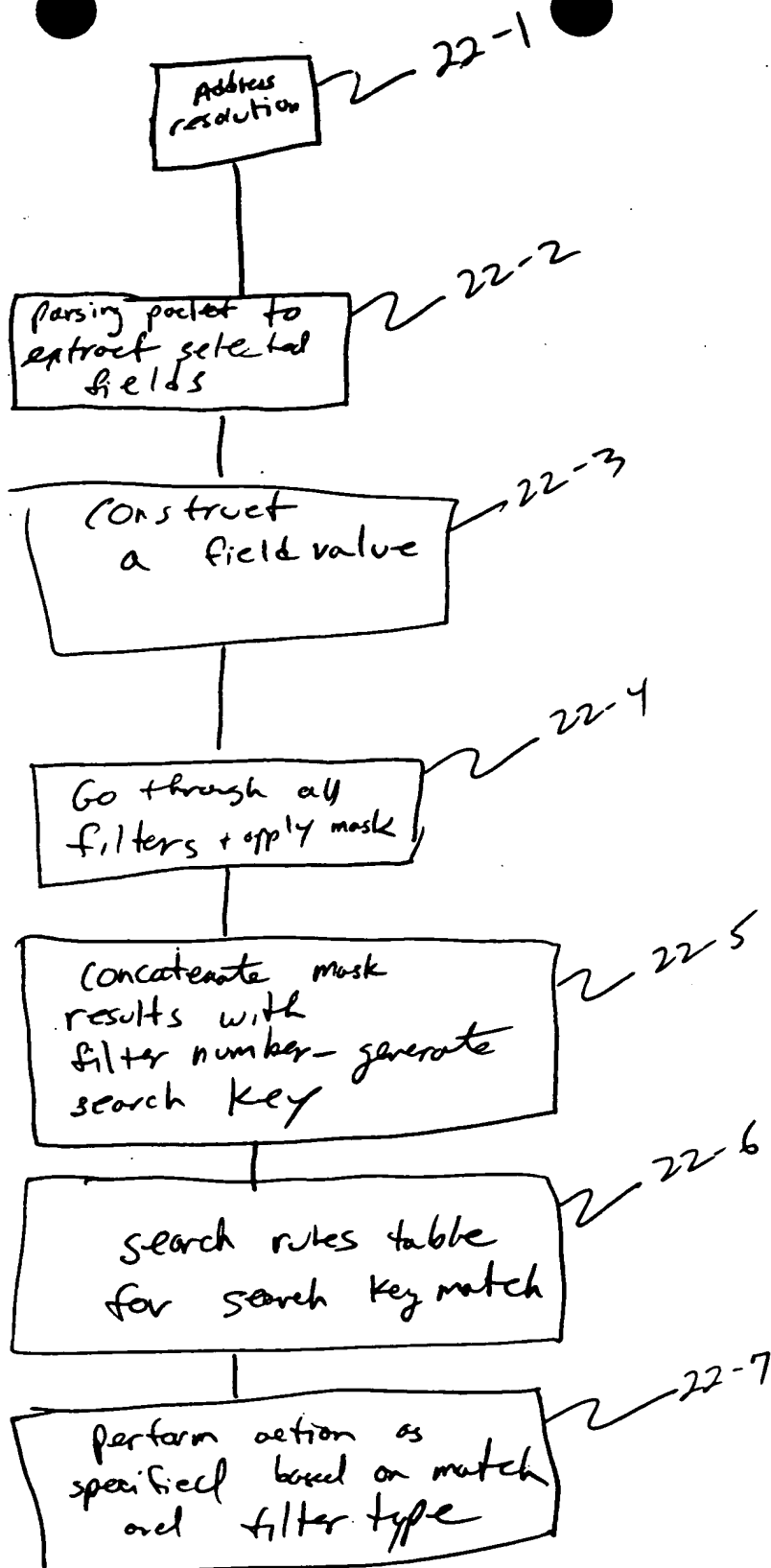


Fig. 22

✓ 22

Counter (5b)	Output Mod (5b)	Output Port (6b)	TOS_ P (3b)	Diff Services (6b)	802.1p Priority (3b)	Actions (11b)	Filter Select (3b)	Ingress Port (6b)	Egress Mod (5b)	Egress Port (6b)	Filter Value (512 b)

Fig. 23

002FE016B6C350

30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
Source IP Address															
Multicast IP Address															
r	L3 Port Bitmap														
L3 Module Bitmap															
Unused											TTL Threshold		Source Port		

Fig. 24

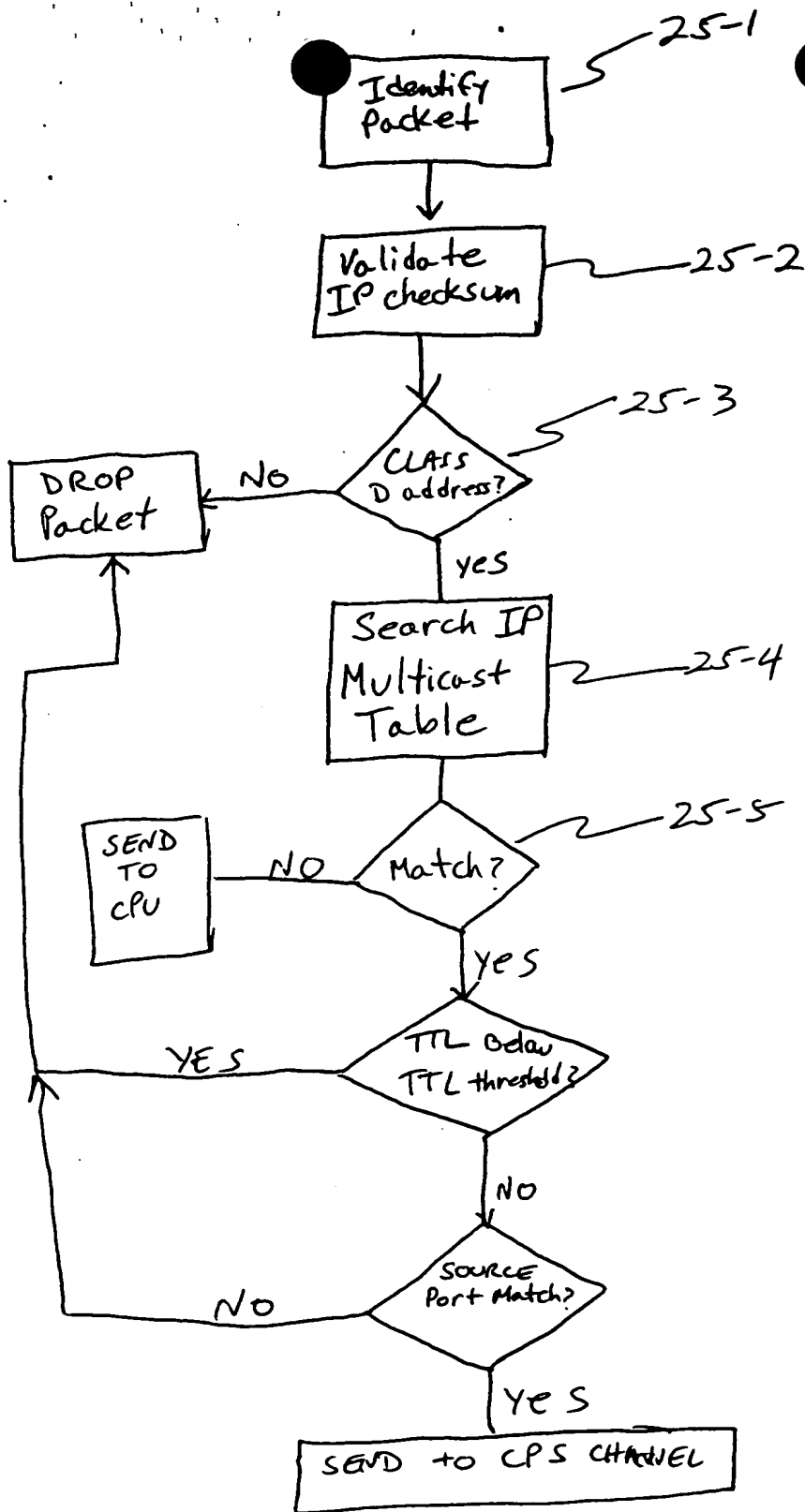


Fig. 25

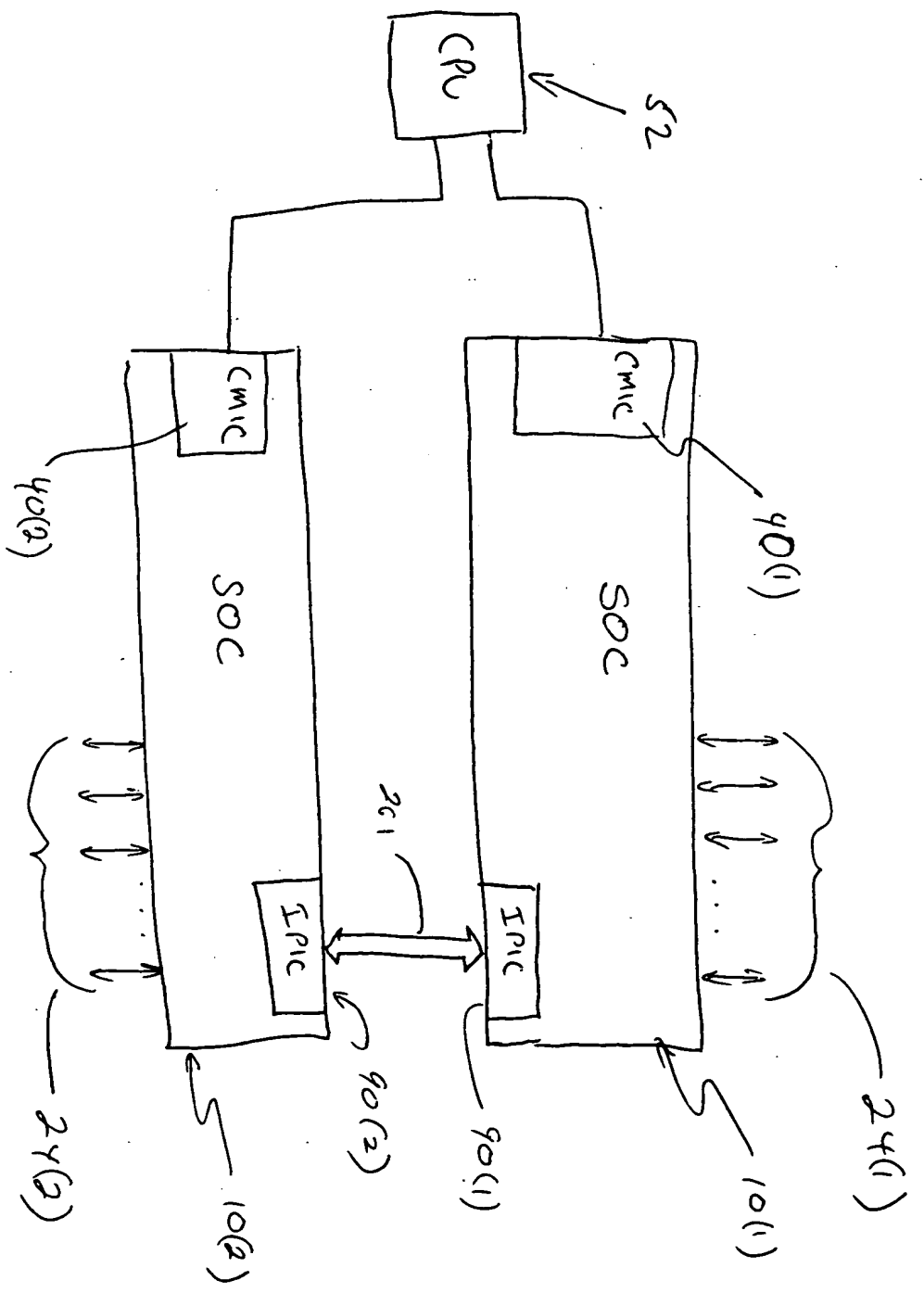


Fig. 26
09527099.034700

Fig. 27a

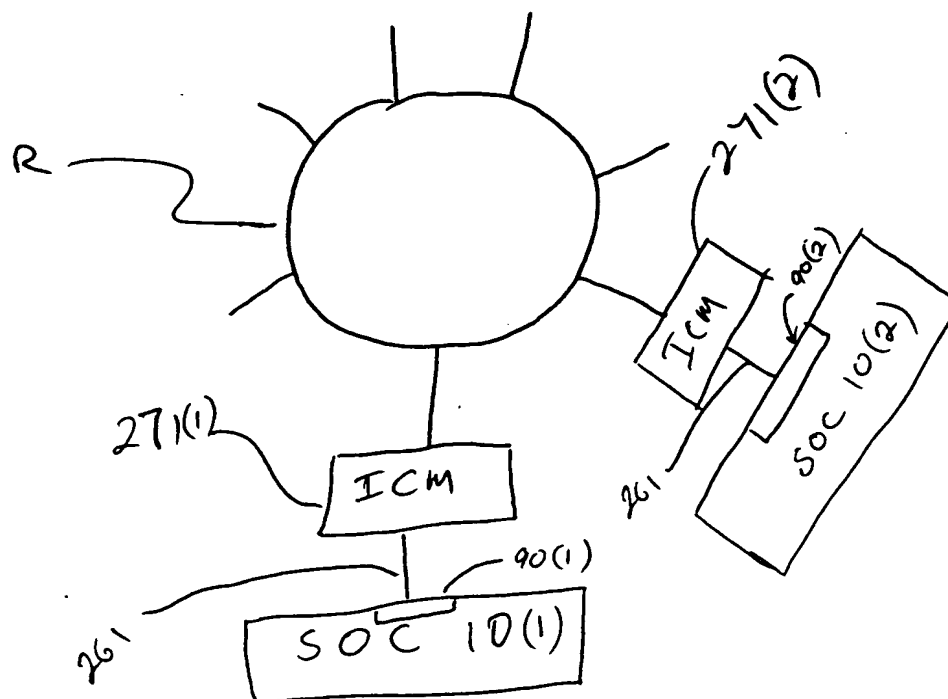
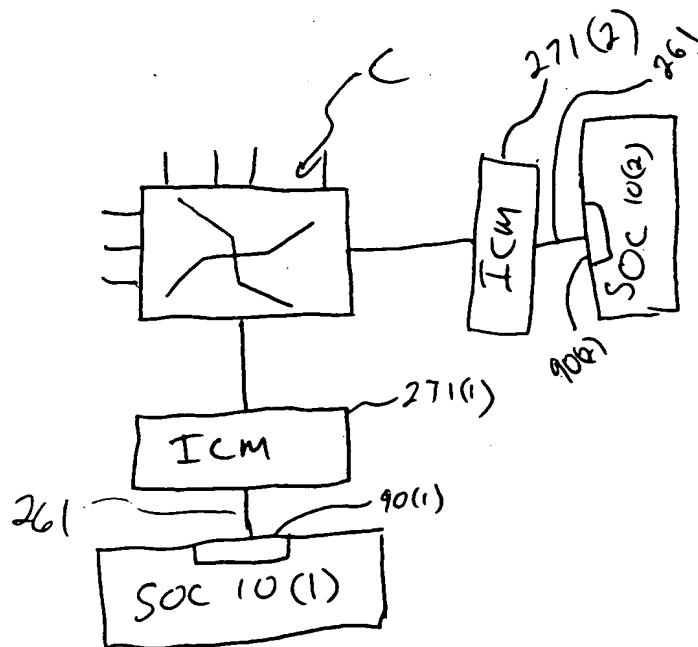


Fig. 27b



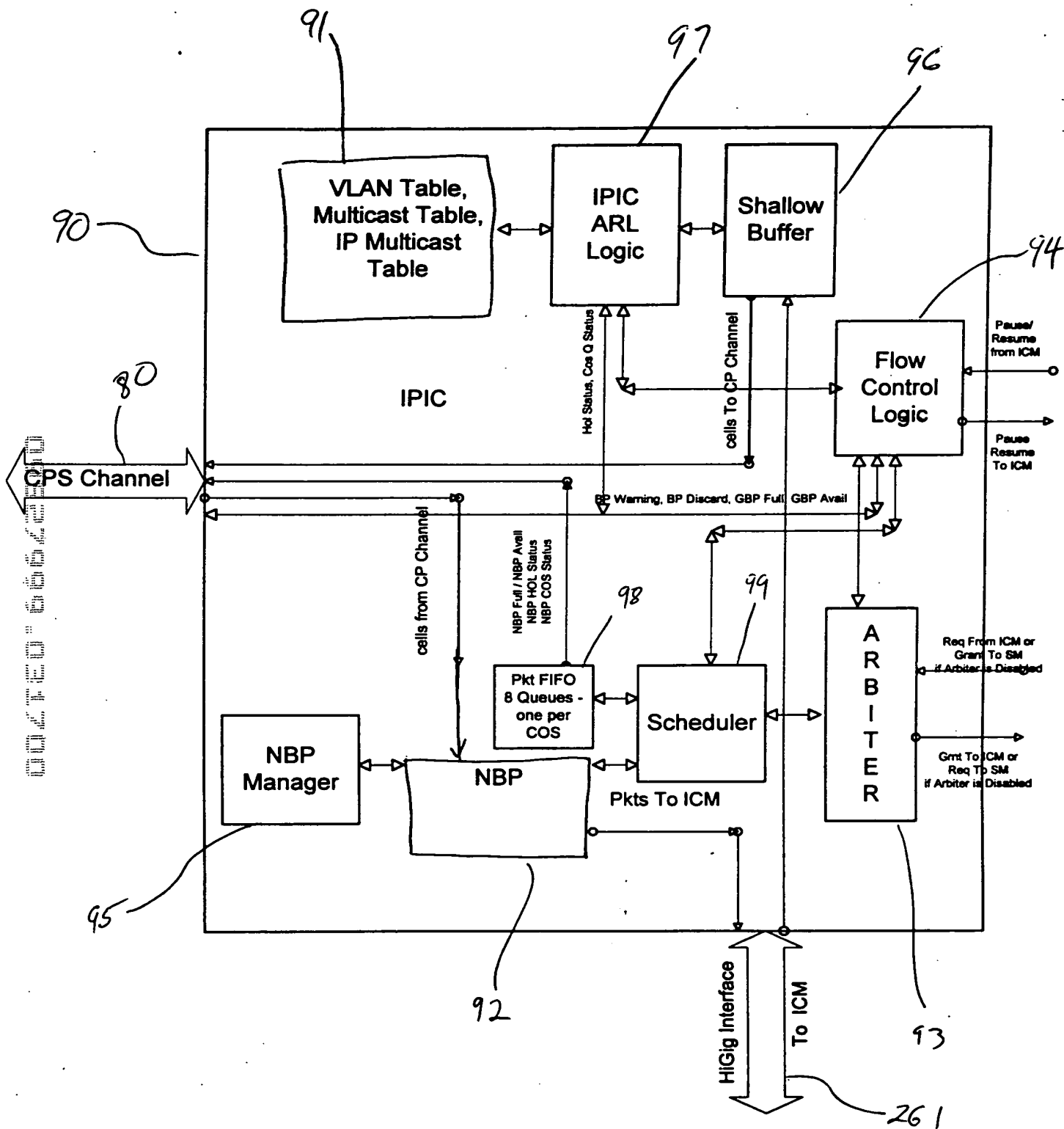


Fig 28.

00270-000250

COS Queue (3b)	C P F	NCA (2b)	802.1p Priority (3b)	Rate Counter (8b)	Rate Counter Threshold (8b)	Rate Discard Thresho ld (8b)	New Code Point (6b)	New COS Queue (3b)	New 802.1 Priority (3b)
----------------------	-------------	-------------	----------------------------	-------------------------	--------------------------------------	---------------------------------------	------------------------------	-----------------------------	----------------------------------

FIGURE 30

Offset Field	Offset 1	Offset 2	Offset 3	Offset 4
000	0-15	16-31	32-47	48-63
001	8-23	24-39	40-55	56-71
010	16-31	32-47	48-63	64-79
011	24-39	40-55	56-71	72-87
100	32-47	48-63	64-79	80-95
101	40-55	56-71	72-87	88-103
110	48-63	64-79	80-95	96-111
111	56-71	72-87	88-103	104-119

Figure 31

0027E0" 00000000

004760-6662560

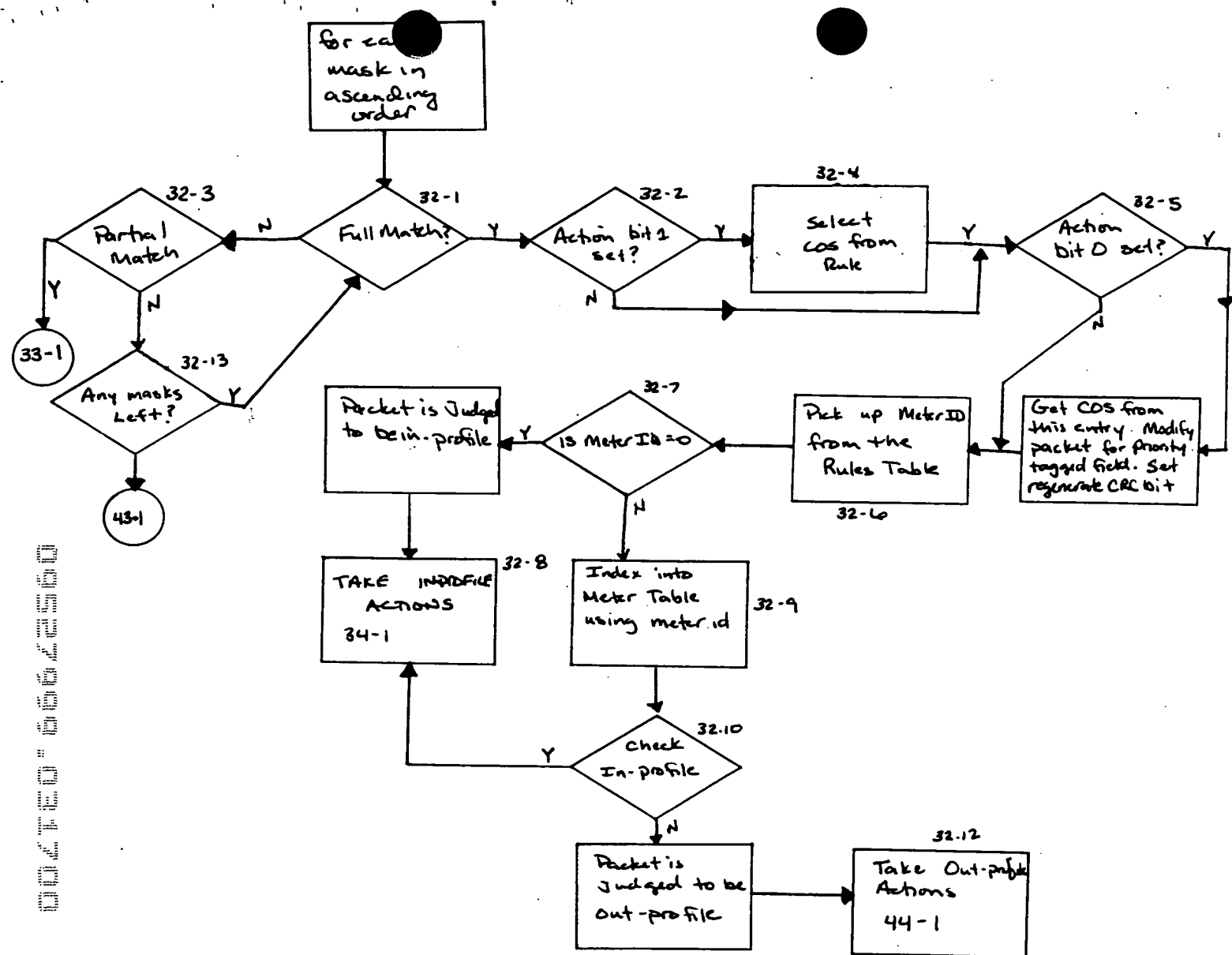


FIGURE 32

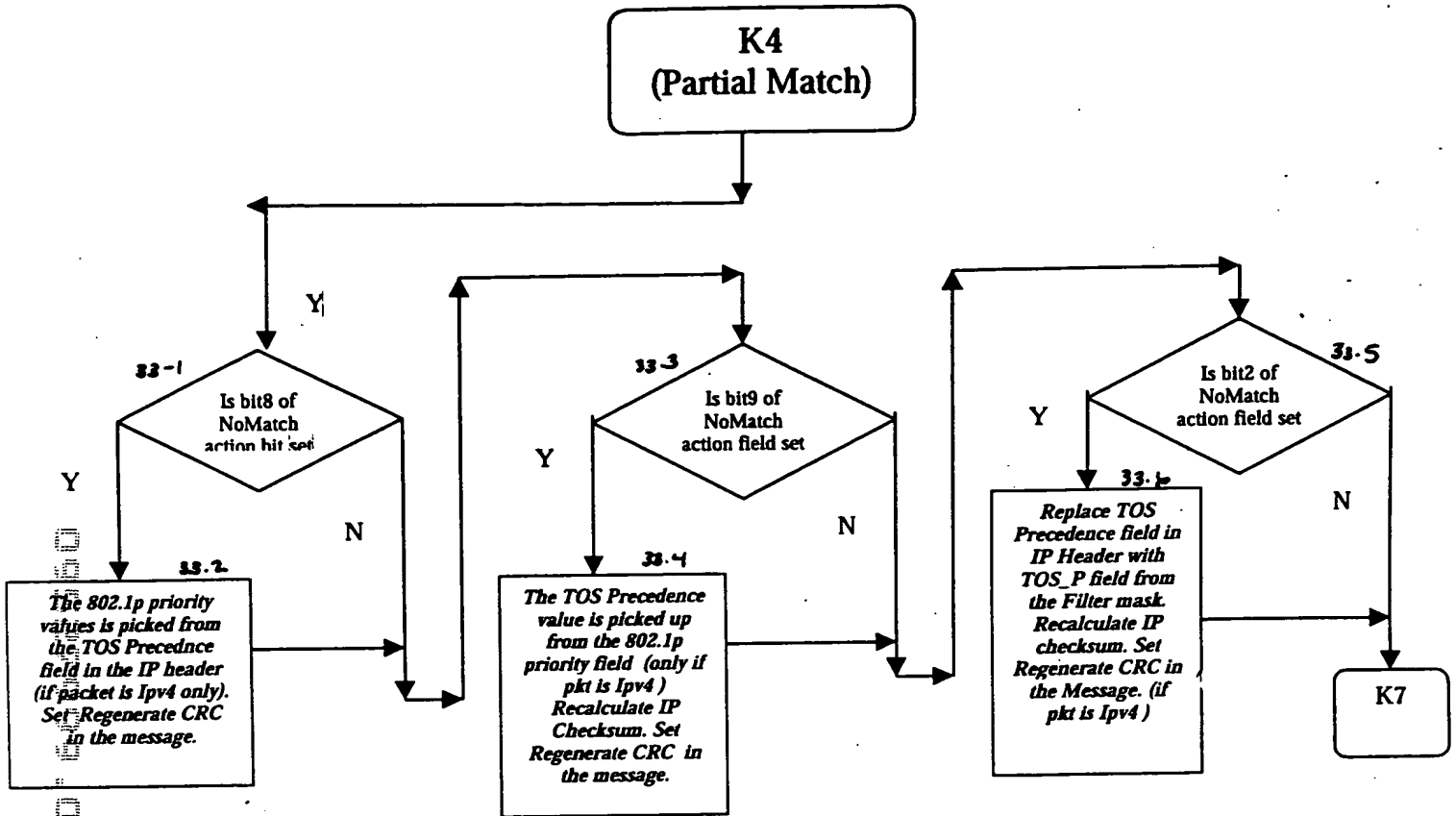


FIGURE 33

In-Profile Actions

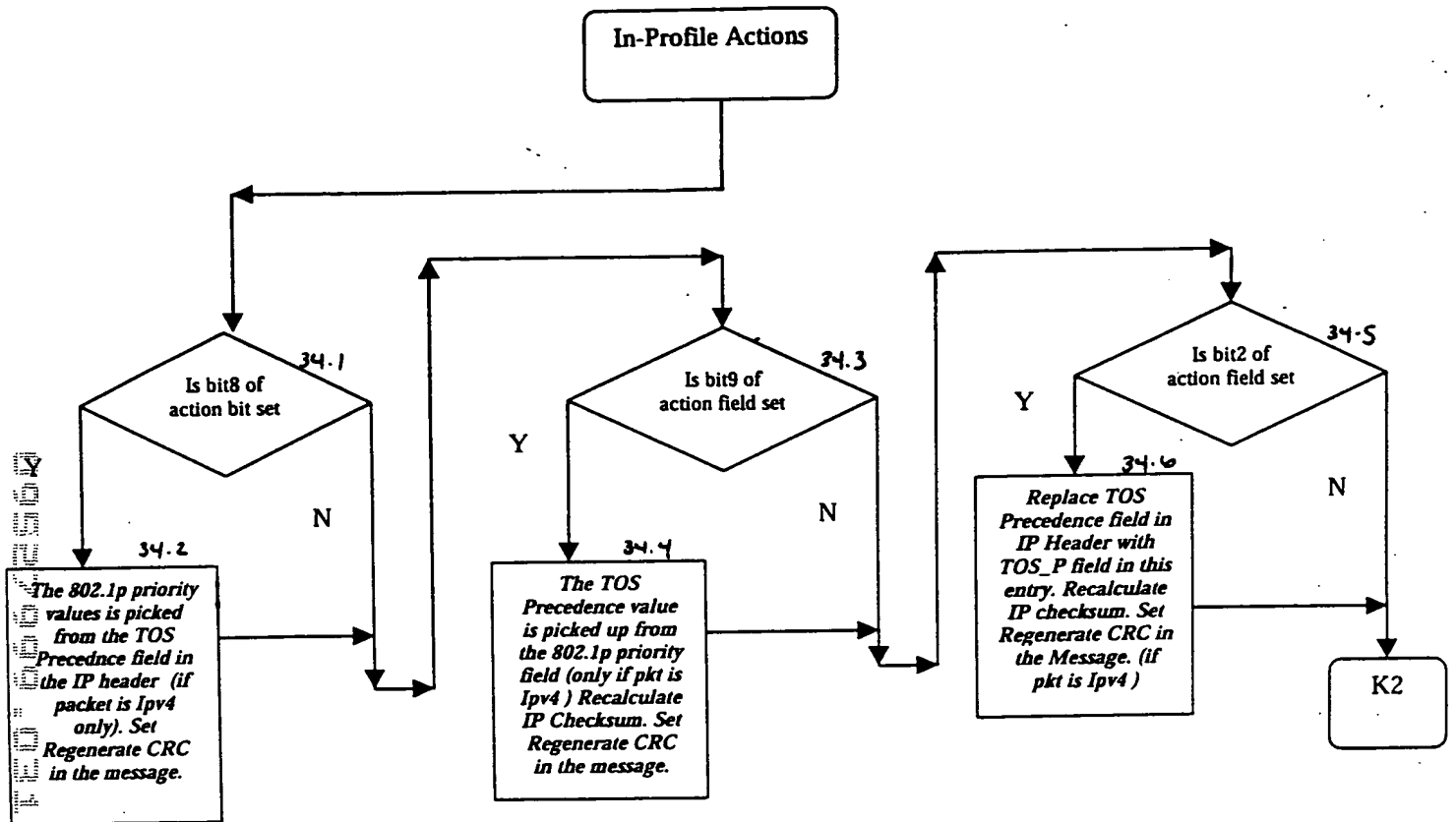


FIGURE 34

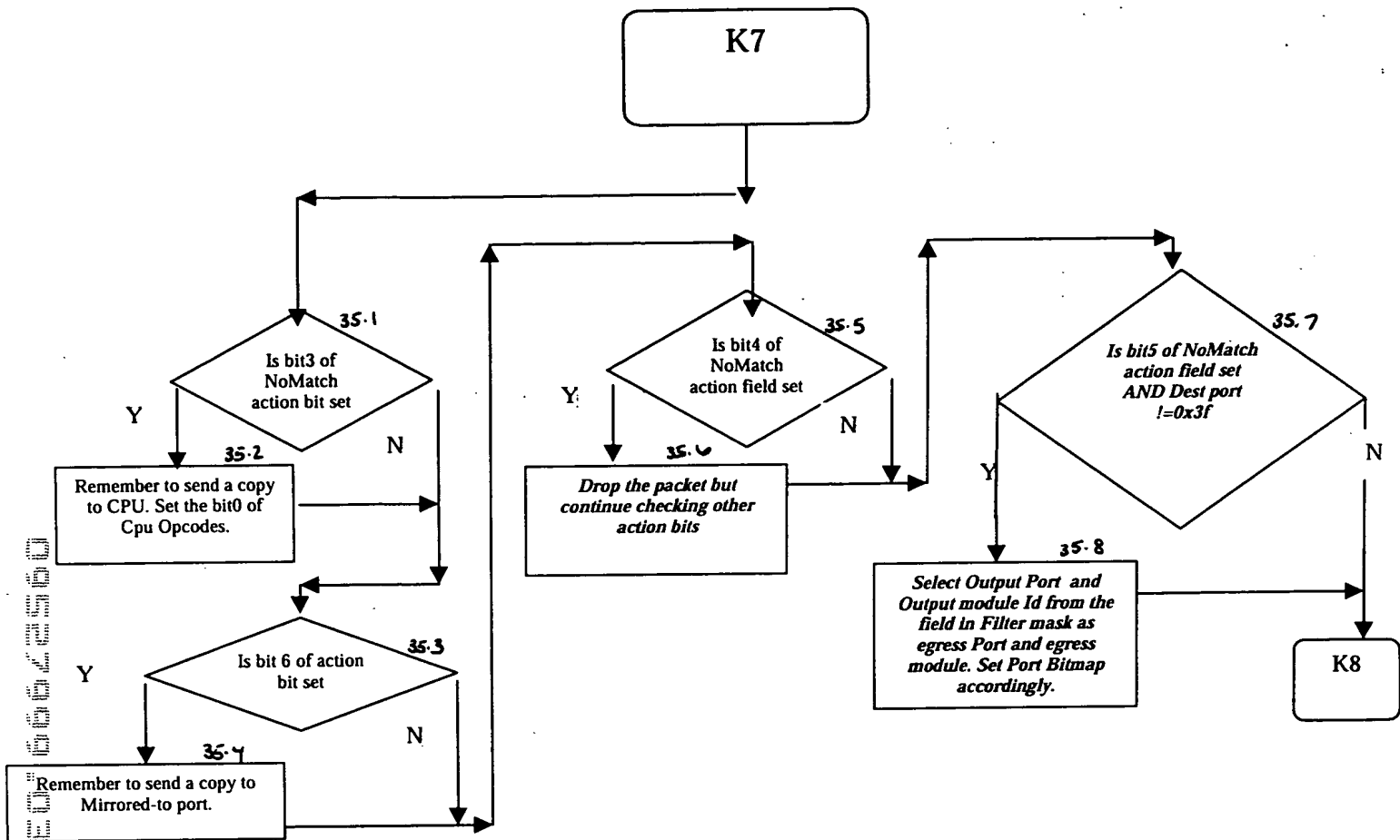


Figure 35

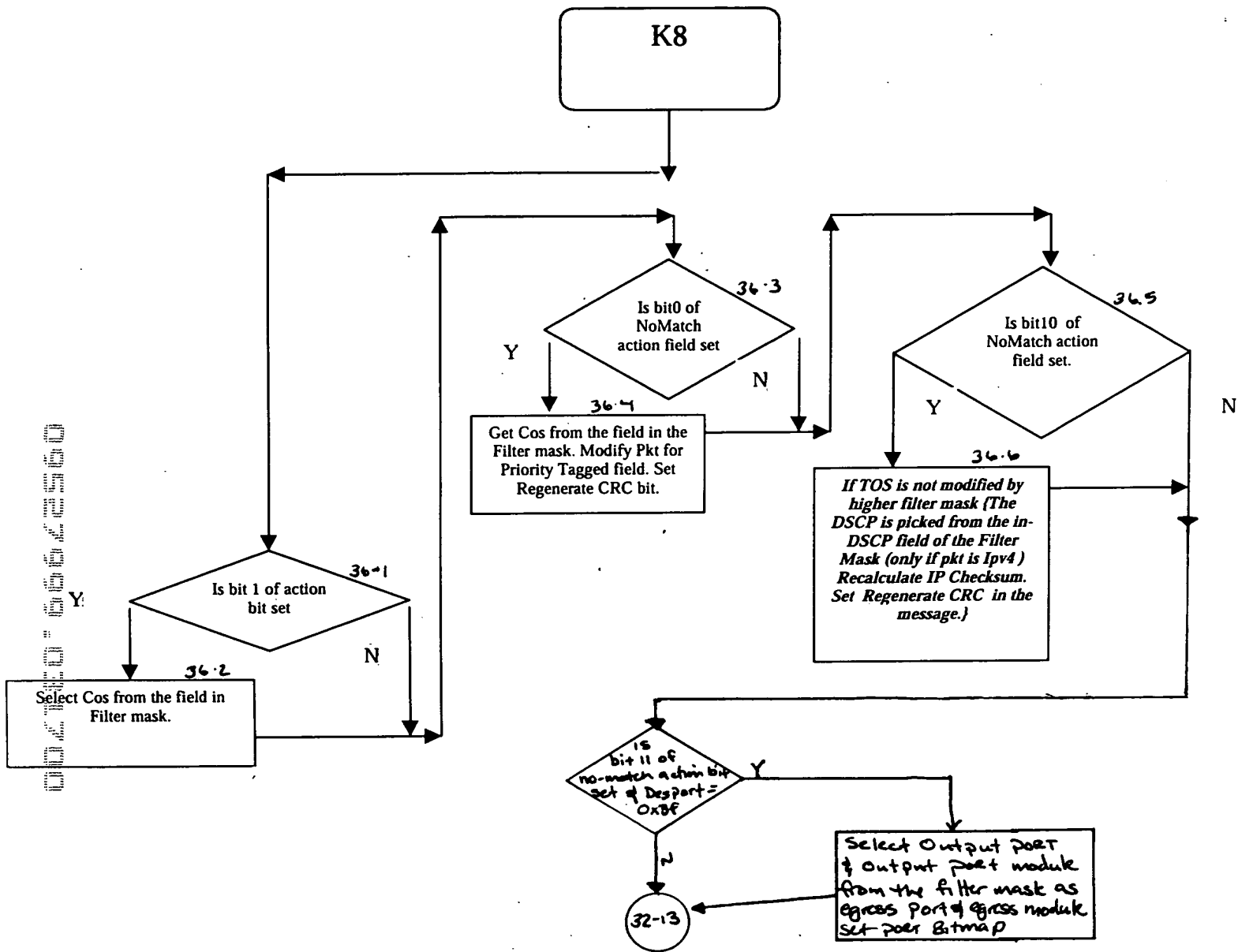


FIGURE 36

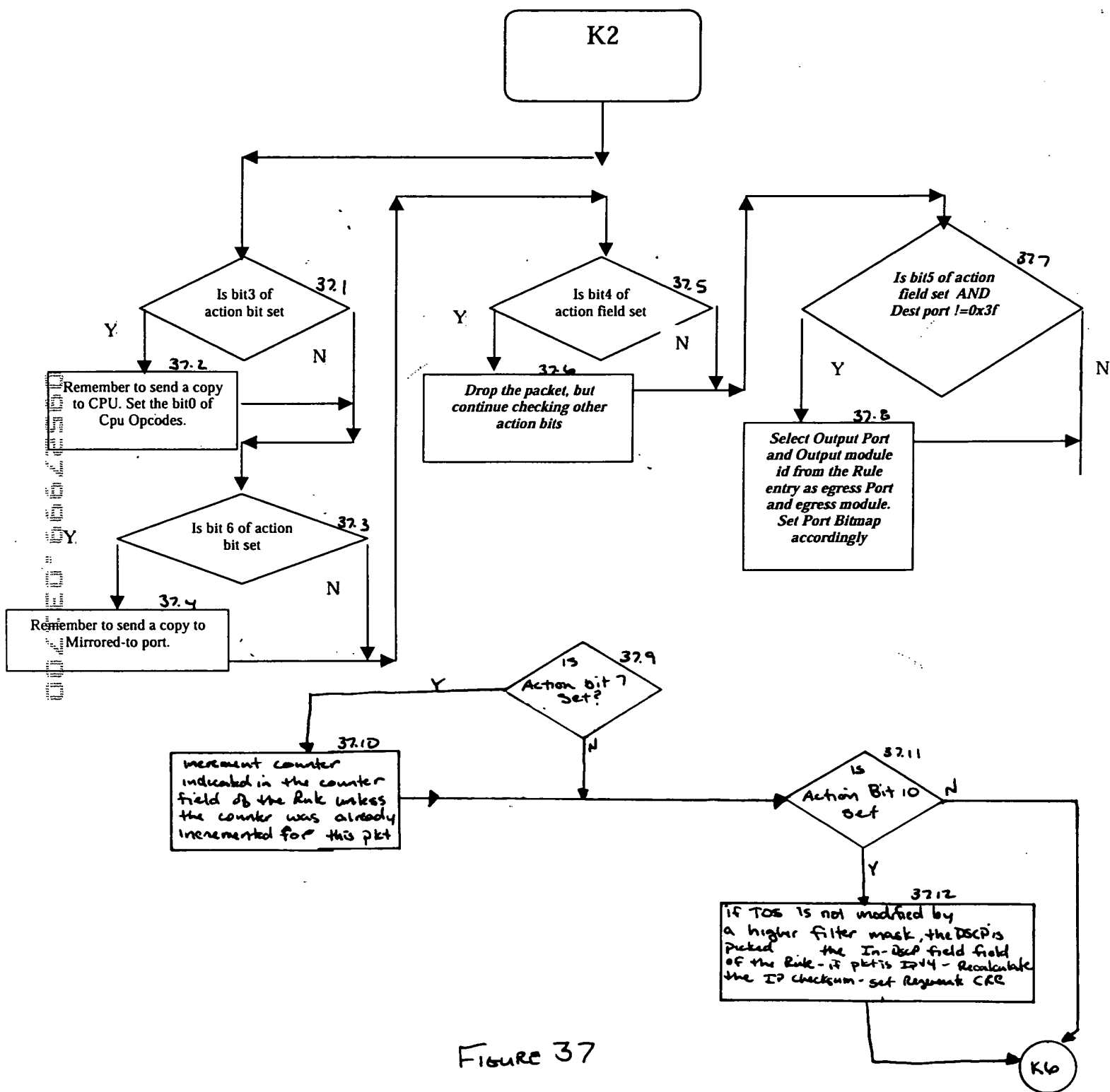


FIGURE 37

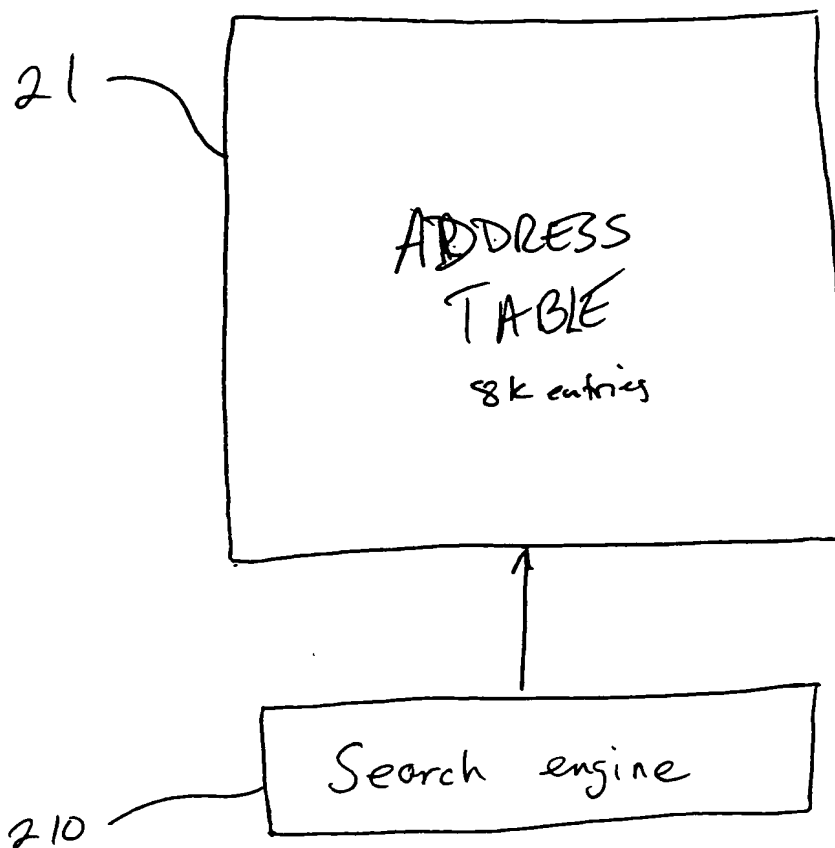


Fig 38

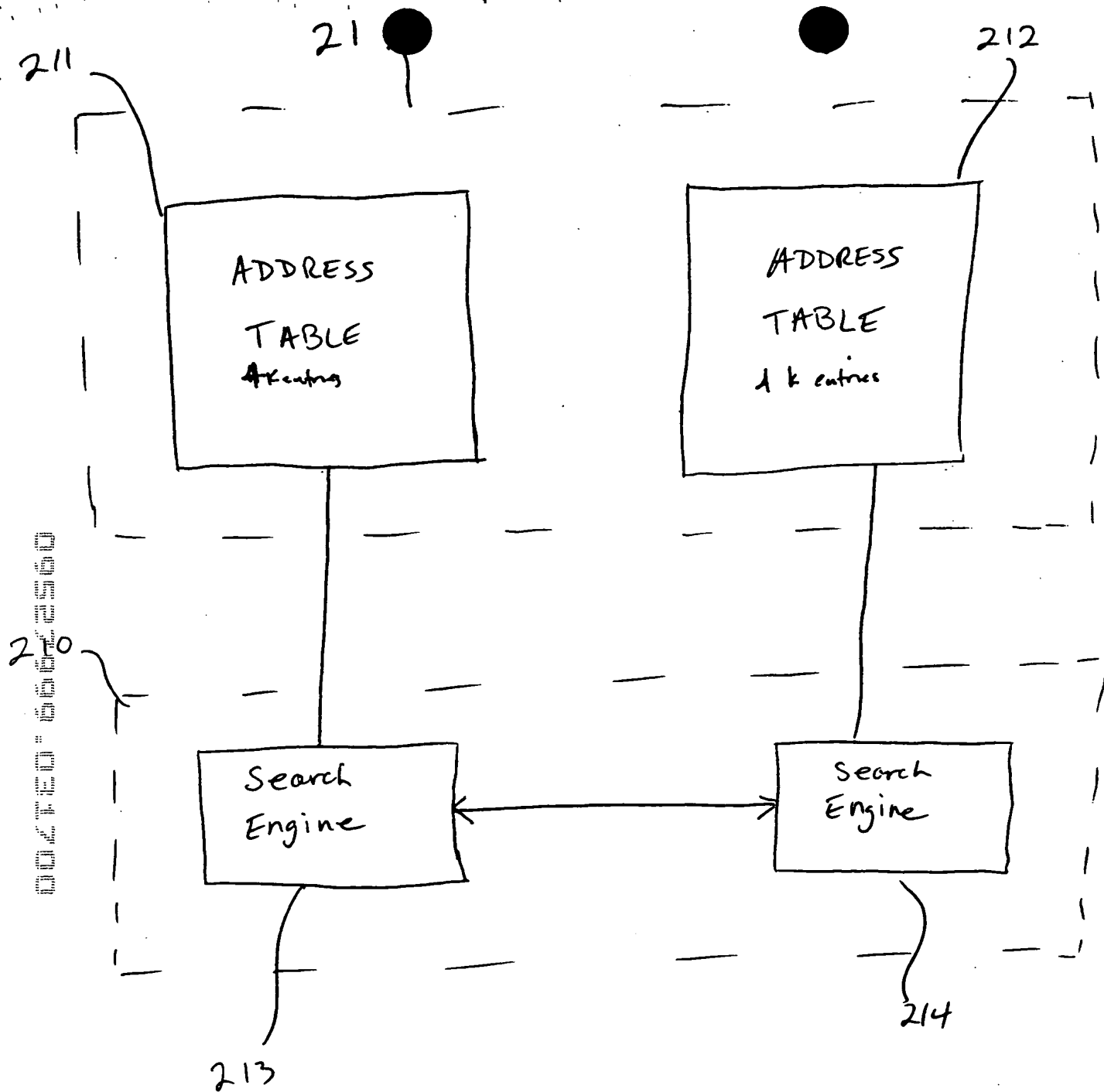


Fig. 39

21 ~

211212

-21

Figure 4/a

address	entry
31	NN
30	MM
29	LL
28	KK
27	JJ
26	GH
25	CF
24	CC
23	BE
22	BD
21	BC
20	BA
19	AC
18	AB
17	AA
16	Y
15	X
14	V
13	T
12	S
11	R
10	Q
9	N
8	M
7	L
6	K
5	J
4	G
3	E
2	D
1	C
0	B

address	entry
30	MM
28	KK
26	GH
24	CC
22	BD
20	BA
18	AB
16	Y
14	V
12	S
10	Q
8	M
6	K
4	G
2	D
0	B

address	entry
31	NN
29	LL
27	JJ
25	CF
23	BE
21	BC
19	AC
17	AA
15	X
13	T
11	R
9	N
7	L
5	J
3	E
1	C

Fig 4/a

004700-000000

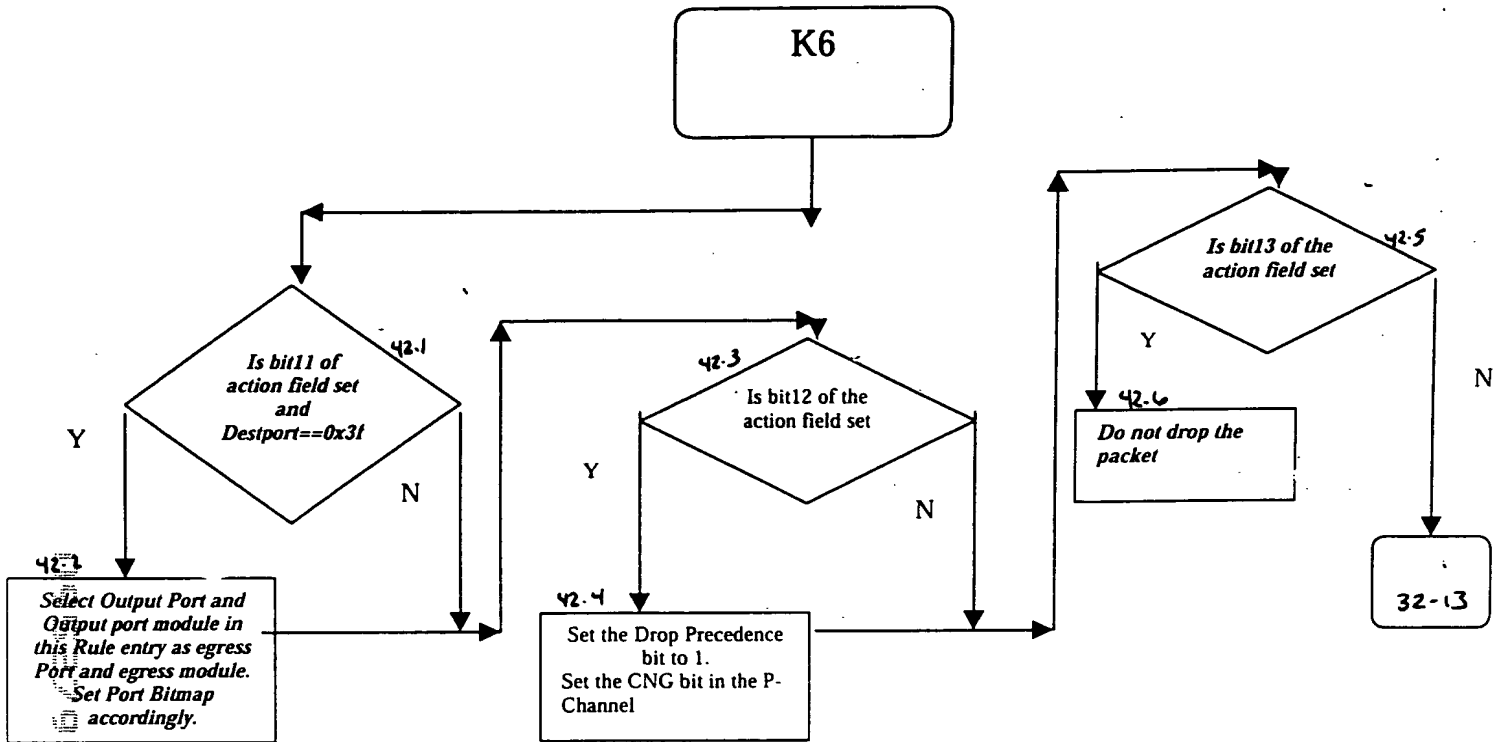


Figure 72

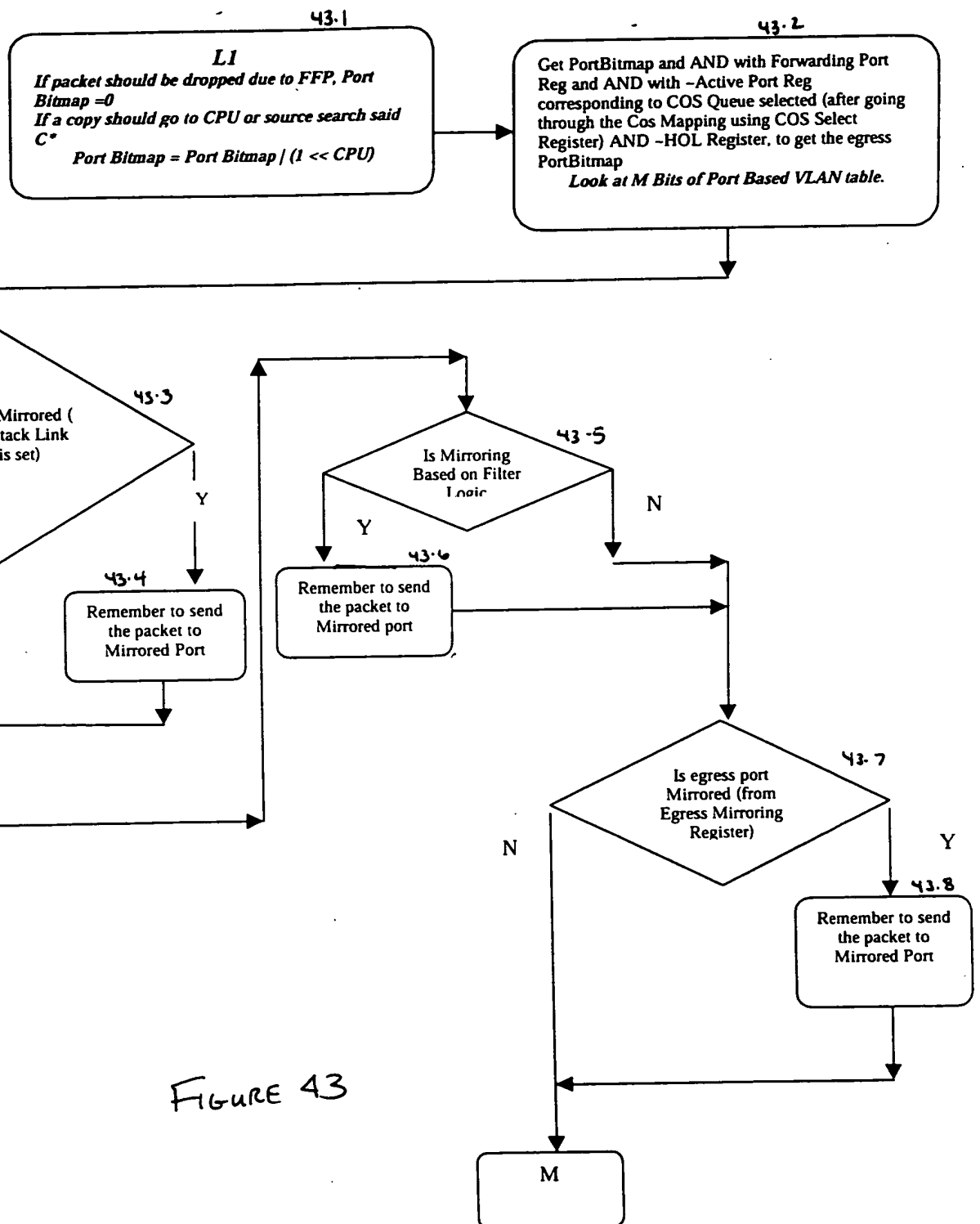


FIGURE 43

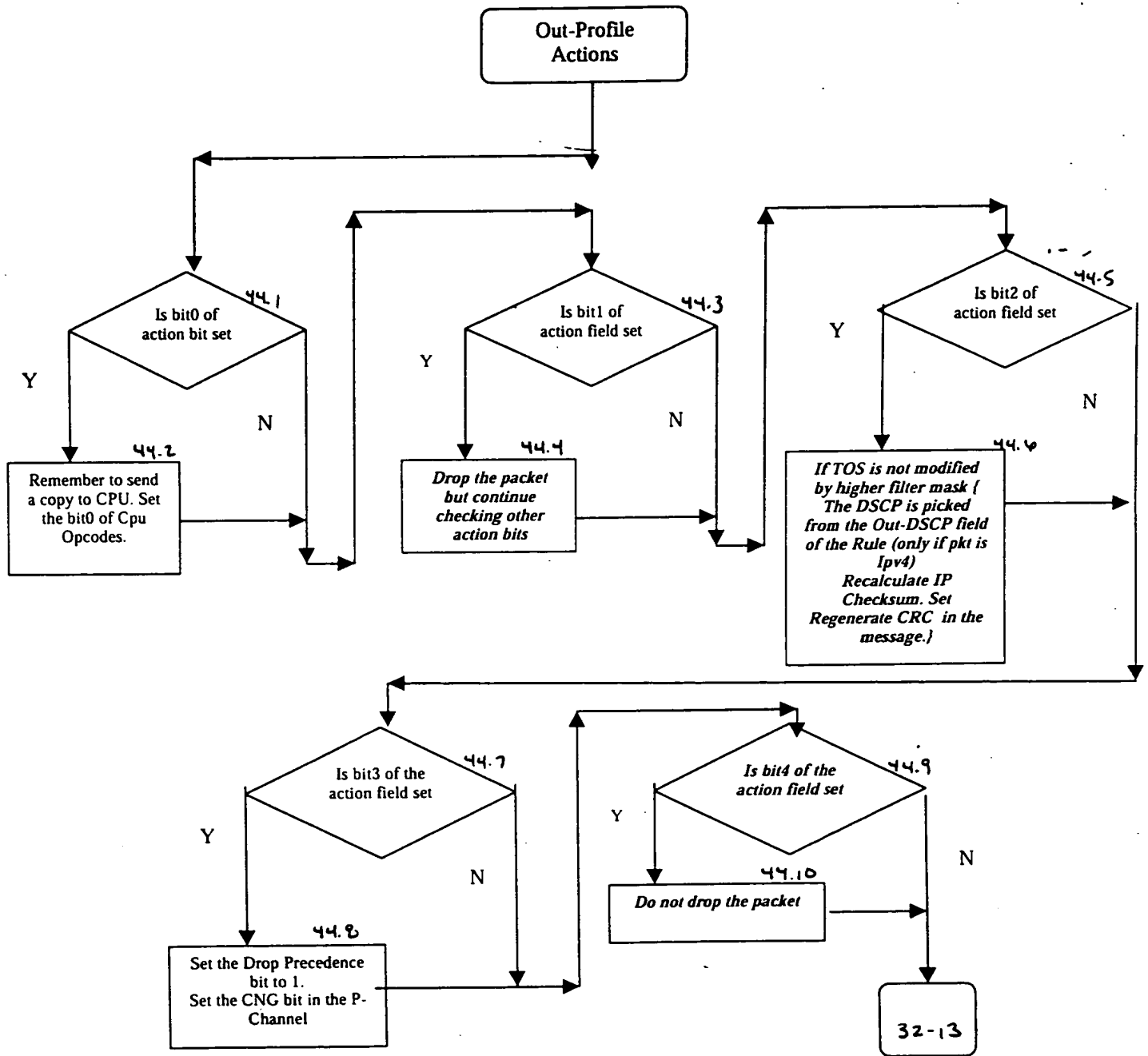


FIGURE 44

```

graph TD
    A[ADDRESS  
RESOLUTION  
LOGIC] --> B[FAST  
FILTERING  
LOGIC]
    B --> C[Differentiated  
Services  
Logic]
    C --> D[COs  
Manager]
  
```

FIGURE 45

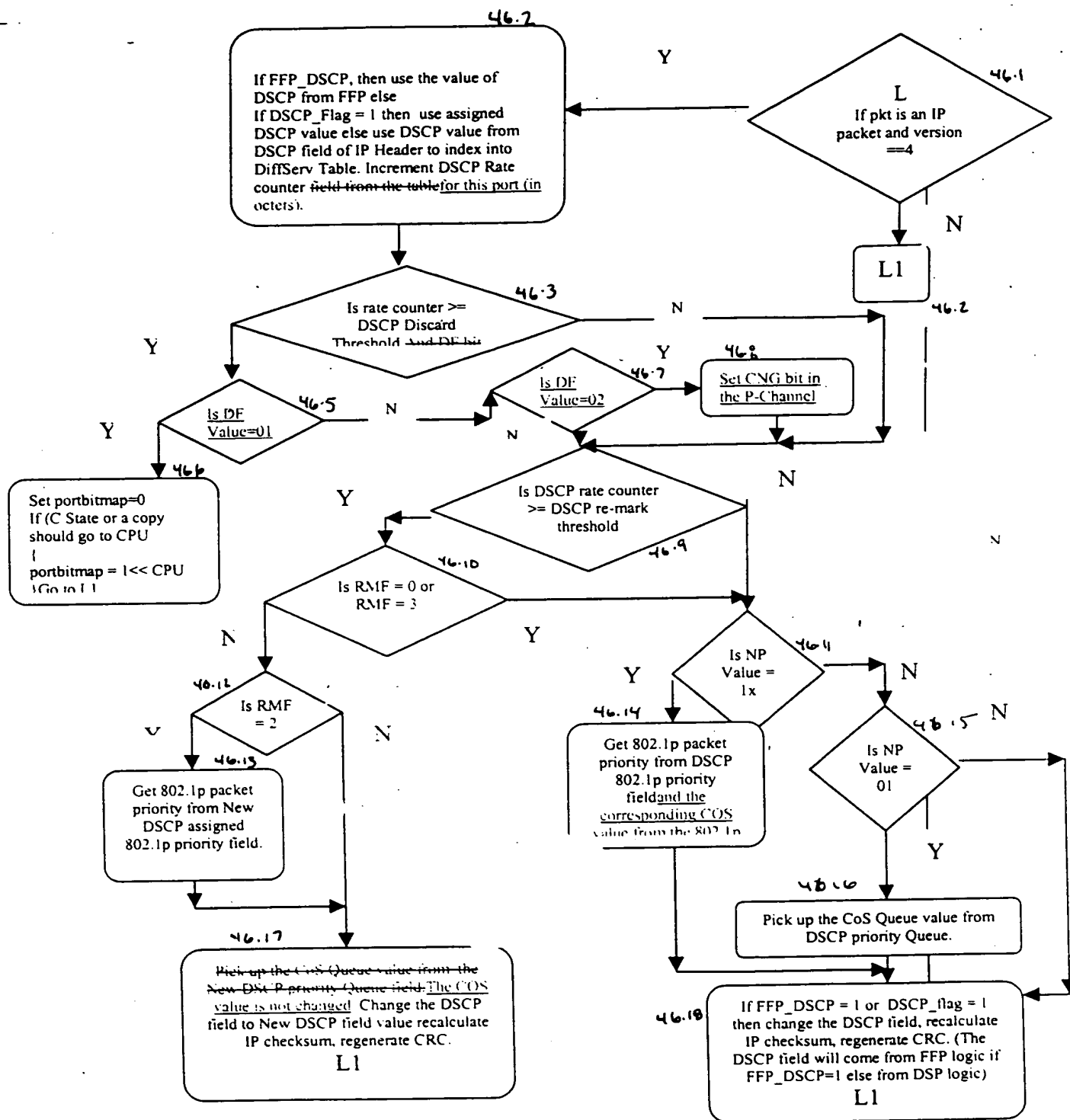


FIGURE 46

